



THE MAGAZINE OF

Fantasy and Science Fiction

35¢

DECEMBER

STEPPING STONE

a novelet by

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I Feel It
in My Bones
AN ARTICLE BY
Isaac Asimov





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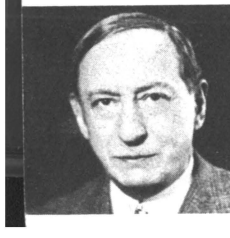
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Fantasy and Science Fiction

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COVER PAINTING BY KELLY FREAS

(Illustrating effect of the Viceroy's flare in "Stepping Stone")

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To give the lead position to a non-fiction article is unusual in any fiction magazine, and hitherto unheard of in F&SF. But this is, I believe, an article of unusual importance (as well as unusual interest and readability). Science fiction readers were informed of the dangers of atomic disaster and devastation long before the general public; but even the best-informed lay reader of s. f. must be baffled by news stories on the topic of radioactive fallout. This topic, conceivably the most vital of our time (and for times to come), first came before the public as a presidential campaign-issue, and has never recovered from its inevitable political obfuscation. Scientists of equal eminence continue steadily to emit precisely contradictory statements, and the half-life of this emanation is incalculable. Regularly today's headlines negate yesterday's and tomorrow's. ("NO DANGER IN FALLOUT," SAYS EXPERT; "DANGER LIMIT PASSED," SAYS EXPERT.) So I have invited Dr. Asimov to examine the available evidence in his professional capacity as Associate Professor of Biochemistry at Boston University School of Medicine, and then to use his skill as a popular writer to make things clear to the rest of us. The result is lucid, informative and terrifyingly significant.

I Feel It In My Bones

by ISAAC ASIMOV

THE PRESIDENTIAL CAMPAIGN OF 1956 introduced a new word to the American public: *strontium-90*. And ever since then, the sound of the word has been growing louder and louder.

What exactly is strontium-90? Or, to begin with, what exactly is strontium?

Strontium is a chemical element

first isolated in 1808. In the century and a half since then, strontium has the rather odd distinction of having remained one of the most nearly useless elements in the entire list.

Strontium nitrate, when heated in a flame, gives that flame a bright red color, so that it is used in railroad flares and in fireworks. Stron-

tium oxide has a minor application in sugar-refining and strontium bromide and strontium iodide have very limited medical uses. That about exhausts the list.

But strontium has one fatal property which all chemists knew about from the beginning but which no chemist ever suspected (until this decade) would have such awesome consequences for the human race.

Strontium, you see, has chemical properties that are very similar to the more familiar and infinitely more useful element, calcium. The strontium atom is a little over twice as heavy as the calcium atom but that is the only difference worth mentioning. Almost anything the calcium atom will do, the strontium atom, in more lumbering fashion, will also do.

Living creatures have learned to utilize calcium compounds in a number of ways. Calcium is an indispensable factor in the clotting of blood and in the cement that keeps cells glued together. The bones of all vertebrates (including man) are made up chiefly of calcium phosphate. The shells of molluscs and of birds' eggs are calcium carbonate.

Presumably, living things might have learned to use strontium compounds as easily and have done about as well, except that there seems no point to it. Strontium atoms occur in the soil and ocean much less commonly than do cal-

cium atoms. In fact, in the Earth's crust generally there is only one strontium atom for every four hundred calcium atoms. Why bother looking for that one strontium when there are four hundred calciums available? *

So strontium is not necessary to life and is not found in living tissue except as an accidental contaminant.

In fact, no chemistry textbook, except the largest and most comprehensive, ever devoted more than a paragraph to strontium; and a paragraph is all it was worth.

That is, until 1944.

Now for the "90" part of strontium-90. Every strontium atom has in its nucleus exactly 38 protons, no more and no less. In addition, the nucleus contains a certain number of neutrons. The neutron number, however, is not constant, but varies from atom to atom. Some strontium atoms contain 46 neutrons in their nucleus, some contain 48, some 49 and some 50. If we count in the 38 protons present in each case, it means that some strontium atoms have a total

*And yet just to show that it can be done and that old Mother Nature is still the best science fiction writer of them all, there is a species of shellfish in the Great Lakes (so I am told) that fashions its shell out of strontium carbonate. Why it should go to the bother of sieving the rare strontium out of the waters and how it manages to latch on to it, to the exclusion of the so-similar calcium, no one knows.

of 84 particles in the nucleus, some 86, some 87 and some 88.

To distinguish these varieties of strontium atoms, the nuclear chemist speaks of strontium-84, strontium-86, strontium-87 and strontium-88*. To the ordinary chemist, however, these varieties (called *isotopes*) are strictly yawn-worthy. The four strontium isotopes are practically identical in chemical behavior. All four are equally useless.

Only these four strontium isotopes exist in nature. Nuclear chemists, however, by bombarding atoms with speeding subatomic particles have managed to put together strontium atoms with anywhere from 43 to 59 neutrons.

None of these additional strontium isotopes, these man-made varieties, are stable. The nucleus of one of these artificial isotopes will, even if left strictly alone, explode in various ways and emit particles. In doing so, it changes its nuclear composition to some stable arrangement of protons and neutrons. Then, and only then, does the atom quiet down, and when it does so, it is no longer strontium of any variety.

Now strontium-90 is one of the man-made strontium isotopes. Its

nucleus contains 38 protons and 52 neutrons. ($38 + 52 = 90$) One of the ways in which this isotope may be man-made is through man-arranged uranium fission.

A uranium-235 atom, when struck by a neutron under the proper conditions, breaks approximately in two. It doesn't always break in exactly the same way so that up to 170 different isotopes are formed in the process with anywhere from 72 to 161 particles in their nuclei. One of these isotopes is strontium-90 and, as a matter of fact, it is one of the more frequent isotopes formed, making up about 5 per cent of the total.

All the isotopes so formed, the *fission fragments*, including strontium-90, are unstable. All emit energetic particles, changing their atomic identity as they do so.

As long as the subject of uranium fission has arisen, let's follow it up. It will lead us back to strontium-90; you can be sure of that.

The explosion of a nuclear bomb presents the population in the vicinity with three kinds of immediate danger, and the population of the Earth generally with a fourth kind of delayed danger. The three immediate dangers are 1) blast, 2) heat, and 3) radiation.

Blast and heat are the familiar accompaniments of ordinary bombs, but are much magnified in nuclear bombs. The radiation is

*Every sample of strontium or its compounds contains some of each of these varieties. Out of every 10,000 strontium atoms chosen at random, the inquiring chemist would find 8,256 strontium-88 atoms, 987 strontium-86 atoms, 702 strontium-87 atoms and 55 strontium-84 atoms.

something newer and uglier. It consists of x-rays and gamma rays speeding outward from the explosion, shouldering their way through any living tissue that they strike and often disrupting vital chemical processes in doing so. If disruption is sufficient, *radiation sickness* is the result and, in extreme cases, death. It depends on the dose.

However, the burst of dangerous radiation that accompanies a nuclear bomb explosion lasts only a minute or so.

That leaves the fourth danger, the delayed danger, the great danger.

The unstable (*i.e.*, *radioactive*) fission fragments formed by an exploding nuclear bomb are blown up into the atmosphere by the familiar fireball and mushroom cloud we have all seen on television or in photographs. Eventually, the fragments come to Earth again and it is this settling back of fission fragments that is called *fallout*.

There are three types of fallout, depending on the size of the bomb and its position when exploded. If a nuclear bomb is exploded at ground level, the fission fragments are all bound up with relatively large particles of soil and settle back to Earth speedily, and usually within about a hundred miles of the blast. This is *local fallout*.

A bomb exploded in the air will, if it is a small one in the *kiloton*

range (that is, equivalent in explosive force to a mere thousand tons or so of dynamite), send its radioactive debris into the lower atmosphere (the *troposphere*) unmixed with soil particles. The prevailing westerly winds will carry it eastward for hundreds or even thousands of miles and it will settle out within one or two months, mainly in the latitude in which the bomb was originally exploded. This is the *tropospheric fallout*.

A large bomb exploded in the air, one in the *megaton* range (that is, equivalent in explosive force to a million tons or more of dynamite), will send radioactive material still higher. The stratosphere will be reached. Once in the stratosphere, the fission fragments will remain there for years, perhaps even for decades, being carried by the jet streams to all corners of the Earth and slowly, little by little, coming to Earth again—everywhere. This is the *stratospheric fallout*.*

*There has been talk recently of developing "clean" H-bombs; that is, H-bombs that will, on explosion, yield a non-radioactive fallout. The method by which this is to be achieved has not yet been mentioned but I can speculate.

Hydrogen fusion itself does not result in any radioactivity to speak of. However, in order to get hydrogen atoms to fuse to helium, they must first be heated to millions of degrees Centigrade. The way that is done is to use a uranium fission bomb to produce the heat and act as a trigger for the hydrogen fusion bomb. It is from the exploding fission bomb that radioactive fragments are derived.

To reduce the radioactivity, we must

Now what are the dangers of fallout?

The radioactive fission fragments produced in a nuclear explosion become stable by emitting very energetic electrons from the nucleus (and sometimes gamma rays as well). The collision of those electrons with living tissue can produce radiation sickness and, depending on the dose, death.

The danger of a particular type of unstable atom depends upon the force with which those electrons are sprayed outward and the number being emitted in a given time.

Some atoms are very unstable and break down rapidly; some are less unstable and break down rather slowly. The measure of the instability of a particular type of atom is its *half-life*; that is, the time it takes for half the atoms in a quantity of a particular type to break down.

All things being equal, a heap of atoms with short half-lives spray more electrons (or other particles or radiation) into the surrounding space than does a similar heap of atoms with long half-lives. Thus, it would seem that a short-lived atom would be more likely to cause radiation sickness than would a long-lived atom.

figure out a way to reduce the size of the uranium fission bomb trigger. Or else, we must devise a method of having the components of the uranium fission bomb hurled to earth and out of the way before the fusion fireball really gets going. Alterna-

So it would . . . at first.

The very energy and enthusiasm with which short-lived atoms break up means that after a while none or practically none of each atom is left. Atoms with half-lives of only a few seconds (which includes many of the fission fragments) are gone with the fireball and so can do no damage to anyone not so close to the explosion as to be consumed by blast and heat at once.

Even atoms that have half-lives of a few days or weeks can have only local effects. They are gone by the time tropospheric fallout comes to Earth. The electrons have been expended harmlessly several miles up and it is the stable descendants of those atoms that settle down.

But there are also long-lived atoms among the fission fragments and these must also be considered. Their radiations are weaker and they are less dangerous than the short-lived atoms to begin with. But the long-lived atoms hang around. An atom with a half-life of six weeks, say, will still be around in fair quantities when the tropospheric fallout comes to Earth. An atom with a half-life of ten years will linger in dangerous amounts when even the stratospheric fallout comes to Earth. An

tively, a method might be devised for reaching the required temperatures by some means other than uranium fission. (Alternate methods do exist in theory.)

atom with a half-life of thirty years will not only be around when the stratospheric fallout comes down, but will be still with us in annoying quantity a century after it comes down.

If the half-life were *too* long, say, a few thousand years, the radiation effects would last enormously long but would be so weak as to constitute little if any danger.

This is the way it works out, then:

1) Fission fragments with *very short* half-lives are extremely intense radiators but are not dangerous because they don't last long. (Not dangerous, that is, to mankind as a whole.)

2) Fission fragments with *very long* half-lives last a long time but are not dangerous because they are very weak radiators.

3) Fission fragments with *intermediate* half-lives are strong enough radiators to be dangerous and last long enough to be dangerous, too.

It is the third category that we must worry about.

There are just two types of fission fragments that fit neatly into category three. These are cesium-137 and strontium-90. And of these two, strontium-90 is by far the more dangerous, for several reasons.

Cesium-137 and strontium-90 have about equal half-lives (30 years for cesium-137 and 28 years

for strontium-90) so that one might think they were equally dangerous. A cesium-137 atom, however, breaks down by emitting one electron, becoming in this fashion a stable atom of barium-137.

A strontium-90 atom, on the other hand, breaks down by emitting *two* electrons, becoming in this fashion a stable atom of zirconium-90. The double dose of strontium-90 electrons is even worse than it sounds since the strontium-90 electrons are individually more energetic than the cesium-137 electrons and can therefore do more damage.*

*A still more damaging isotope that many of us have heard of is *cobalt-60*. The cobalt-60 atom emits only a single electron in breaking to the stable nickel-60 atom. However, its half-life is 5.3 years so that a quantity of cobalt-60 would be emitting just over $2\frac{1}{2}$ times as many electrons as would a similar quantity of strontium-90. This, perhaps, does not sound *too* bad, especially when you consider that the cobalt-60 electrons are less energetic than the strontium-90 electrons.

But cobalt-60 does something that strontium-90 does not do. Cobalt-60 emits gamma rays in addition to electrons, and unusually energetic gamma rays at that. Gamma rays are much more penetrating and can do much more damage than the speeding electrons could.

Fortunately, cobalt-60 is *not* among the fission fragments of ordinary nuclear explosions. However, the grisly suggestion has already been made that a nuclear bomb can be encased in matter that would, under the intense radioactive bombardment of the concentrated fission fragments formed in the first moments of nuclear explosion, be converted to cobalt-60. This would then be spread far and wide in a "super-dirty" fallout.

Secondly, if cesium-137 happens to get into the body (where, being right in the center of things, it can do the most damage), it doesn't stay there long. Cesium atoms do not occur naturally in the body and the body has no use for them.

To be sure, cesium atoms bear a strong chemical resemblance to the much smaller sodium and potassium atoms (which do occur in the body and are necessary to its functioning) but these related atoms undergo rapid turnover. That is, they are taken in and eliminated by the body fairly rapidly so that while sizable amounts of sodium and potassium are always in the body, any particular sodium or potassium atom doesn't stay in the body very long.

Therefore, even if the cesium-137 tried to get by on its relationship to sodium and potassium, it wouldn't linger in the body. The level of cesium-137 in the body at any particular moment would remain very low; so low that the danger of the speeding electrons it emits would be virtually zero.

How different for strontium-90. Here is where the cursed similarity to calcium is devastating. There is a turnover of calcium in the body, too, just as in the case of sodium or potassium. However, 99.5 per cent of the body's relatively large supply of calcium (which may be as much as 3 pounds or more) is in the bones. Bone is a sluggish tissue and while

turnover of atoms in it exists, it is very slow. A particular calcium atom in bone may remain there a long time, even years.

The method by which strontium-90 gets into the body is simple enough. To begin with, the strontium-90 settles onto the soil along with the rest of the fallout. Vegetation growing in the soil absorbs the strontium-90 along with the calcium it is really after. Animals (including man, of course) which eat the vegetation then take up the strontium-90 along with the calcium they are really after.*

When strontium-90 enters the body, the chemical mechanisms of the body make little distinction between it and the very similar calcium. It, too, is deposited in the bones.

And there the strontium-90 atoms remain for years.

And there the strontium-90 atoms accumulate.

Until fifteen years ago, strontium-90 existed nowhere on Earth, except perhaps in exceedingly small quantities in the special equipment of a few nuclear physicists. Until fifteen years ago, no

*Actually, the major source of calcium in the American diet is milk and cheese. It is therefore also the major source of strontium-90 in the diet. The cow picks up strontium-90 from the grass it eats and pumps the radioactive atoms into the milk along with the calcium that belongs there. The milk industry is as concerned these days about public fears of strontium-90 as is the tobacco industry about its fears of lung cancer.

creature on Earth, in all the long history of life, had any strontium-90 at all in its bones.

Today strontium-90 exists everywhere. An estimated total of 400 pounds of it is spread out over the surface of the Earth while another 1000 pounds is still floating about in the stratosphere.

Of course, this is pretty thin spreading in actual fact and to talk about quantities of strontium-90 in individual human beings, scientists find it convenient to use a much smaller unit of weight than the pound. They use the *Sunshine Unit*, which they abbreviate S. U. (This is so called because the AEC studies of fallout were termed "Project Sunshine.")

One micromicrocurie of strontium-90 for every gram of calcium in one's body is what is meant by 1 S.U. The *curie* is a unit not of mass but of radiation. It was originally defined as the radiation given off by a gram of radium in equilibrium with its emanation (radon). (A gram is about one twenty-eighth of an ounce.) It is now more generally calculated as meaning 37 billion disintegrations per second.

A *micromicrocurie* is one one-trillionth of a curie, or 2.12 disintegrations per minute. This number of disintegrations would result from 45 million atoms of strontium-90.

The body of the average adult male contains 1400 grams of cal-

cium. So a man with 1 S.U. (which, I should add, nobody has reached yet) would have 63 billion atoms of strontium-90, or one two-trillionth of an ounce. Because the S.U. is a unit of radiation-mass ratio, it should be clear that a child, with less mass, can have a smaller amount of strontium-90 than a man but a higher S.U. figure. (And children also acquire strontium-90 more readily, because they deposit calcium in their growing bones more rapidly than adults do.)

Now then, every adult human being on Earth today contains about 0.1 to 0.2 S.U. of strontium-90 scattered throughout the bones of his body. Children have as much as 0.5 S.U. (Much the same goes for any animal with bones, by the way, not just humans.)

Furthermore, the quantity of strontium-90 in bones must increase, even if all nuclear bomb testing stopped today. There is still the thousand pounds of strontium-90 in the stratosphere that is slowly settling out.

As the body absorbs more strontium-90, a point will be reached where the strontium-90 in the bones will be excreted or will break down at a rate just equal to that at which new strontium-90 is being absorbed. In this way, an equilibrium will be attained.

If no more nuclear bomb testing takes place, this equilibrium will be reached (it is estimated) in

about 5 to 10 years and bones will then contain 2 to 3 S.U. If, however, nuclear testing continues at the present rate of about 10 megatons per year, then the equilibrium (it is estimated) won't be reached for fifty or sixty years and bones will then contain somewhere between 16 and 40 S.U. of strontium-90.

All right, so we have less than half an S.U. of strontium-90 in our bones right now. How bad is that?

In some ways, it might seem to be not bad at all. After all, we are exposed continuously to all sorts of energetic radiation and speeding sub-atomic particles just by virtue of being on Earth. When these other radiations are measured in Sunshine Units, the term first devised for measuring strontium-90 absorption, the meaning of 1 S.U. is "the amount of radiation you would get from the equivalent quantity (defined above) of strontium-90."

For instance, the soil is slightly radioactive.* If you live in a building, you will pick up the equivalent of 17 S.U. a year more

than the amount you would pick up if you lived in a frame house, because brick has higher natural radioactivity than wood has. If your town is a mile high in altitude you will collect the equivalent of 8 S.U. more per year than if you lived at sea-level, because of the additional bombardment of cosmic rays. All in all, the average man picks up a total of 50 S.U. per year from all sources.

Well, then what's another few tenths of an S.U.? Why worry?

The worry, it seems, is in the *location* of the strontium-90 and the fact that it stays put in that location. Radiation and particles from all other natural sources bombard the body from outside (or from a moving position inside) in random fashion. Few significant hits are made. (It's like shooting blindfold at a few flies buzzing about in Grand Central Station.)

The strontium-90, however, concentrates all its fire in the region of the bones and the bones have a particularly sensitive spot. The red blood cells and some of the white blood cells are formed in the marrow of the long bones and the continuous bombardment of the marrow by high-speed electrons could result in knocking the cell-forming mechanism awry.

One form of awry-ness will produce the disease known as *leukemia*, a kind of cancer of the blood in which the bone marrow is form-

*The radioactivity of the soil is not just because it contains a scattering of uranium and thorium. Every bit of the soil contains the very common element, potassium, and one of the potassium isotopes, potassium-40, is weakly radioactive. A carbon isotope, carbon-14, is formed in small quantities in the atmosphere by cosmic ray action, and it is radioactive. Both potassium-40 and carbon-14 are in our bodies from birth to death as a consequence.

ing excessive quantities of immature white blood cells. The condition gets progressively worse as these useless white blood cells crowd out the necessary red blood cells and death follows inevitably. As far as we know today, the condition is incurable.

Now it is known that radiation, in general, will cause leukemia. Radiologists (that is, doctors who specialize in x-ray therapy and such things) have an incidence of leukemia ten times that of other doctors.

In 1954, 10,000 people died in the United States of leukemia. Dr. Edward Lewis of California Institute of Technology estimates that about 1000 of these cases were caused by the effects of the general radiation of our environment. (What caused the other 9000? Ha, don't we wish we knew.)

But, were any of the deaths caused by the strontium-90 blasting away at the bone marrow at point-blank range?

That is where the major disagreement among experts lies. Some say strontium-90 has already caused leukemia and some say not. The arguments depend on whether a *threshold of action* does or does not exist.

What do we mean by a threshold of action?

Suppose we have a brick resting on the sidewalk. Push it very gently. Nothing happens. The

force of your push is insufficient to overcome the frictional forces between brick and cement.

Push the brick harder. Still nothing. Push it still harder. Ah—now it begins to move.

It takes a certain minimum push to make the brick move at all. After that minimum has been reached, the harder you push the faster the brick moves, but as long as you don't reach the minimum, the brick doesn't move at all. The minimum push required to move the brick is the threshold of action.

The moving-the-brick-on-cement case is an example of an action with a pronounced threshold of action. Suppose, instead, you had a billiard ball on a perfectly smooth glassy surface. The lightest push will set it rolling. You couldn't push it so lightly as not to make it move. (Of course, an exceedingly light push will cause it to roll exceedingly slowly.)

All right, then, consider electrons bombarding the bone marrow. If there is a sizable threshold to this action, it means that as long as there are fewer electrons than a certain minimum, there will be no effect at all on the bone marrow. Only when total electron energy raises itself above that minimum will action start and leukemia become a possibility.

The National Academy of Sciences Committee on Internal Emitters has suggested that a quantity of strontium-90 as high as 100 S.U.

may represent such a threshold. If this were the case, then strontium-90 is not endangering human beings now and won't be even if H-bomb testing were continued at the present rate.

Ah, but is 100 S.U. the threshold? Actually, it may be simply a plausible (or, perhaps, wishful-thinking) guess. There are a number of scientists who seem convinced that there is a very low threshold of action to the strontium-90 effect.

If that were so then strontium-90 is a killer right now. If 1000 people died of leukemia in 1954 as a result of the 50 S.U. they picked up from natural radioactivity, then the 0.5 S.U. (maximum) of strontium-90 in the bones now may have caused 1 per cent of those deaths. That would mean that strontium-90 was killing 10 Americans a year with leukemia. (Exactly which particular American would die would depend on which particular American had the unlucky hit scored upon the proper points in the proper cells by the speeding electrons. It's a kind of huge shooting gallery with ourselves the ducks.)

From a cold-blooded and objective standpoint, 10 deaths a year may not seem much of a price to pay for the possible good that may be derived from H-bomb research. Even a rise to 800 deaths a year as the strontium-90 level reaches as high as 40 S.U. may not seem ex-

cessive. After all, the pleasure car kills some 40,000 Americans a year.

Unfortunately, we don't know that the leukemia effect is necessarily one of simple direct proportion.

Thus, to bring up an analogy, a concentration of carbon monoxide in the air of less than 0.01 per cent is harmless. No effect and no symptoms. We are below the threshold of action.

A concentration of 0.05 per cent of carbon monoxide will, however, give you a headache within an hour. A concentration of 0.1 per cent will give you a worse headache and a concentration of 0.2 per cent a still worse headache. Raise it to 0.3 per cent, however, and it's no longer a question of the headache getting still worse. You're dead.

Now, then, as strontium-90 goes up in concentration, is it just a question of the leukemia incidence rising with it in direct proportion, or is there a point which is another boundary line, another threshold of action, beyond which everybody gets leukemia? If so where is it?

No one knows about that either.*

*An even more subtle danger to the human race than leukemia is the question of mutations. It is known that radiation causes mutations and that increasing the intensity of radiation increases the number of mutations and that most mutations are for the worst. And as far as mutations are concerned, most authorities are agreed that there is no threshold to speak of. So it is quite

Now why should there be this disagreement about the thresholds of action of strontium-90 and leukemia?

One reason lies in the difficulty of conducting long-term experiments on human beings in a matter of this sort. (It is always difficult to tell for sure how far animal experiments might apply.)

The logical thing would be to take a large number of human beings and subject them to carefully graded doses of radiation or feed them carefully measured quantities of strontium-90, observe them for fifty years or so and note how many develop leukemia—running appropriate controls, of course.

Well, who's going to volunteer for such an experiment? Or conduct one? Not I. Not anybody.

A lot of the information upon which scientists are depending goes back to the cases of the few unfortunate women who got radium poisoning back in the twenties while working on radium-dial watches (and pointing the brushes they used with their lips, if I remember correctly). The radium, which is another member of the calcium family, also got stored in the bones. Those studies seem to show a quite high threshold of action, but the number of cases were

few and the experimental methods of handling radioactive data were primitive, then. It would be unsafe to rely on those data.

So we're left uncertain, with a very poor gamble on our hands.* At best, we break even; no harm done. At worst, we may lose everything; literally everything. . . .

It is only fair to mention that there are those who minimize the danger of fallout. For instance, Lewis Strauss, Chairman of the Atomic Energy Commission, has pointed out to Congress that luminous wrist watch dials deliver more radiation "than all that received from the accumulated fallout to date." A statement such as that is intended to calm the public

*The gamble is worse for Americans than for anyone else in the world. Stratospheric fallout is distributed everywhere but tropospheric fallout remains in the latitude of the bomb and more is distributed near the bomb than far away. Of all the nuclear devices that have been exploded since the first A-bomb went off at Alamogordo in July of 1945, just about half have been exploded on American territory—out west, too. The prevailing winds carry the tropospheric fallout eastward along the entire breadth of the United States. The result is that although the North Temperate Zone has a higher concentration of strontium-90 in its soil than other regions, American soil has the highest of all, about 50% higher than has the soil of Europe or north Asia.

The Russians, on the other hand (we believe), have exploded only half the bombs we have, and explode them somewhere in eastern Siberia, where the fallout is carried over Japan, the Pacific and, perhaps, Canada. If the Russians were as Machiavellian as some people seem to think, they ought by no means to call for an end to H-bomb testing. As things stand now, they're losing, but we're losing much faster.

conceivable that the human race has been done tremendous damage already that may not show up in all its ugliness for several generations.

but I would like to point out several things before calmness becomes total.

1) The public assumes (through the contempt of long acquaintance-ship) that luminous wrist watch dials *are* harmless. But they contribute to background radiation and therefore help raise the incidence of mutations. Furthermore, *if* the threshold of action of leukemia-production-by-radiation is very low such wrist watches help raise the incidence of leukemia as well.

2) Another implication of the statement is that even if luminous wrist watch dials are harmful, fallout is less harmful because it involves less radiation. However, newspapers rarely stress the fact that AEC Chairman Strauss is talking about the external radiation of fallout—that is, the radiation we receive from the air and soil as a result of fallout, and *not* the radiation we receive from the strontium-90 accumulating within our bones. Furthermore, he is talking about the fallout “to date” only and is not mentioning the major portion of the fallout still circulating in the stratosphere and slowly drifting Earthward. So the relative amount of radiation from wrist watches and fallout isn’t as clear as you might think from the newspaper reports.

3) Nor is the amount of radiation the only important factor. The *location* is more important. A small amount of strontium-90 in

the bones will do more harm than a larger amount of radiation striking the skin.

4) Then, too, only a small minority of the human race wears wrist watches with luminous dials; whereas all of us, every single one of us, carries strontium-90. For that reason, even taking Mr. Strauss’s statement at face value, certain individuals might get more radiation from wrist watches than from fallout, but this would *not* be true of humanity as a whole.

5) And still another point: The individual can stop wearing a wrist watch with a luminous dial if he wishes, but strontium-90 is his whether he wishes or not and it will stay with him (in increasing quantities, probably) for the rest of his life.

No, sir; Mr. Strauss may be comforting himself, but he isn’t comforting me.*

To summarize: At the present level of knowledge, nuclear testing represents a gamble in which the stakes are infinite. The gamble is a worse one for our children than for us and still worse for their

*Dr. Curtis L. Newcombe, of the U. S. Radiological Defense Laboratory, San Francisco, has made a further discomforting point. In a press conference on radiation fallout presented by the annual convention of the American Institute of Biological Sciences at Stanford University, Dr. Newcombe “admitted that science has no way of knowing how much contaminated materials Russia and Great Britain are dumping on the world or if the ‘safe’ levels have already been exceeded.”—A. B.

children, even if not another bomb is exploded. Statements to the effect that such-and-such a level of radiation is "safe" can, at present, be only an educated guess at best or wishful thinking at worst. A

particular level *may* be safe and at the moment each one of us is gambling his life that it is.

I feel this to be a poor gamble. I feel it in my bones.

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 E. B. Lewis: "Leukemia and Ionizing Radiation." *Science*, 125:965-972 (May 17, 1957).
 Ernest C. Anderson, Robert L. Schuch, William R. Fisher and Wright Langham: "Radioactivity of People and Foods." *Science*, 125:1273-1278 (June 28, 1957).

After this article was in type, Dr. Asimov received for review A HISTORY OF INDUSTRIAL CHEMISTRY, by F. Sherwood Taylor, and encountered an ironically apposite passage on page 330:

Newly-discovered elements often seem to have small promise of usefulness, but in fact there are very few even of the rarest which have not found some industrial use: so much so, indeed, that we need not scorn the simple faith of Samuel Parkes, who wrote in his *Chemical Catechism* (1806):

"Q. What are the uses of strontian [the early name for the element, from Strontian, Argyllshire, Scotland, where its carbonate was first found—A.B.]?"

"A. Though strontian combines readily with all the acids and possesses alkaline properties, it has not hitherto been employed for any useful purpose. Hereafter it may be found to possess valuable properties, for it exists in abundance and the Author of Nature has formed nothing in vain."

"And yet," Asimov adds, "if the fear of one form of strontium ends by enforcing peace and universal cooperation among the nations (in default of any other alternative), old Samuel Parkes and his 'simple faith' will have won out, along with all the rest of us."

The Word of Willow

Older than Eden's planting, older than elves,
Willows remember a grand world of wet
Whose map was webbed with feathery, walking groves!

They dream of that rich mud, they whisper yet
Of hazy rindled valleys, the hush and drip,
Where willows strode about on yellow feet:

A race not human, although somewhat, with green harps,
Masters of poems and small magics, who could make
Water-spells and runes for roots and sap.

Then Adam woke and named things: the willow-folk -
Became all tree because he called them so,
Became sleeping princesses in towers of bark,

And pollarded princes who've lost the lore they knew.
Now their children shade sad lovers, burial grounds
And haunted houses. Some of them are resigned now,

Only weep into streams and wring gray gnarled hands
Over wild feet knotted and held tight
In man's tamed earth, all power gone from their wands.

Others grow crabbed from straining against fate,
Are racked into Rackham-crones, hags and grutchers
Huddled in tattered shawls, awry with spite,

Wicked old wicker wizards propped on crutches,
And hobnobs of witches clutching besoms in bogs,
Hatching plots against man under their twiggy thatches.

But all sing willow, willow: in shallow quag,
By dyke and ditch, from osier-holt to holt
A question sighs along their yellow rags:

*What is the master-rune of our leaf-alphabet,
The old Word of the Willow that could free us yet
To be trees as men walking?*

They forget, forget. . . .

LEAH BODINE DRAKE

Frederik Pohl is one of the collaboratin'est men even in this field in which multiple authorship is so common. He is best known, of course, for his excellent novels (both science fiction and "straight") with C. M. Kornbluth. He has worked with Jack Williamson on a likable series of teen-age books; and he has further collaborated, in an all but impenetrable haze of pseudonyms, with Isaac Asimov, Frederic Arnold Kummer, Jr., Robert W. Lowndes, Dirk Wylie . . . This story is, I believe, his first with F&SF's Broadway critic William Morrison. Fittingly it deals with collaboration—if in quite a different sense: the sense which the word acquired, in World War II, of helping the invader to maintain his control over one's own people. This control is, fortunately for the world, not so simple a matter as a galactic Viceroy may think. There is, Messrs. Morrison and Pohl shrewdly point out, a certain inevitable flaw in any collaborationist structure.

Stepping Stone

by WILLIAM MORRISON and FREDERIK POHL

ARTHUR CHESLEY WAS A CHEMIST, but you mustn't think of him as a scientist. He was nothing of the kind.

He didn't inquire into the secrets of nature—maybe once he had, but then the foundation grants ran out; and since his specialty couldn't be twisted to sound as though it had anything to do with either nuclear energy or cancer cure it was a matter of get a job or starve. So he got a job. He spent eight hours a night, six

nights a week, watching a stainless steel kettle with his fingers crossed. "She's getting hot, Mr. Chesley!" one of the lab assistants would yell, and he'd have to run over and tell them what to do. "Pressure's up, Mr. Chesley!" another would cry, and he'd have to do something about *that*—or anyway, tell the assistants what to do, because the union rules were pretty strong about who did the actual work. It was all a matter of polymerization, which is cooking

little short molecules into big long molecules, and what came out of it all was rubber, or maybe plastic wrappers, or the stuff that goes into children's toys, depending on what was needed right then—and also on whether or not the kettle exploded. Well, it was an easy job, except when the pressure suddenly climbed. And it was night work, so Chesley had his days free. He kind of liked it, partly because he got to boss the crew of assistants around. And they didn't mind. They thought the whole thing was pretty funny, partly because they got two-forty an hour against Chesley's dollar-seventy-five.

Chesley's wife didn't think that was funny at all. What she said was:

"Stepping stone! Arthur, you've been in a rut for seven years and I want to tell you that I'm getting tired of stepping stones that don't step anywhere and— Another thing, why can't you work days like anybody else instead of sleeping all the time I'm trying to clean the house? Did you ever stop to think how much trouble that makes for me? Can't you have any consideration for anybody else and— And why can't you make your own lunch to take to the plant? Other men make their own lunches. If you wouldn't sit around the house watching television you'd have time to make your lunch, not to mention doing

a few other little— That reminds me, what's keeping you from putting up the screens? The house will be crawling, and I mean *crawling*, with every bug in the Bronx if you don't get around to it. You hear me? Or is that too menial a job for a real chemist—a real *chemist* that's got a job that's a *stepping stone* to a fine career of— Arthur! Arthur, I'm talking to you! You come back here!"

But the job did leave his days free. Chesley escaped from the house and headed down toward the corner bar, where the barkeep drew him a beer with a half-inch collar without waiting to be asked. "You're early," said the bartender, handing Chesley his change. "I thought you'd be watching television."

"That's what I wanted," Chesley said bitterly. "I wanted to see that new program they're talking about."

The barkeep said, "That Viceroy thing?"

"Yeah. The one they cancelled all the other shows for. Harry, what's the matter with you that you don't have a TV like every other bar in the Bronx?"

"It's my wife," the bartender explained; and maybe that wouldn't have been enough for any other man, but it was enough for Arthur Chesley. The bartender said, "Say, whyn't you go see it in person?"

"You mean at the studio?"

"Nah. No studio. Here." And the bartender picked a card off the top of a stack at the end of the counter. "Fellow left these here this morning."

Chesley read it, sipping his beer. FREE ONE DOLLAR FREE it said at the top, and that was pretty interesting. These nuts, he thought, I wonder how they're going to wiggle out of it in the fine print? Chesley had a wide experience of things marked "free," and they had always, always turned out to be not so very free at all. The small print—not very small, either—said only:

The Viceroy

will make an announcement of unparalleled importance to every person in the world

TODAY

At the Yankee Stadium

* ONE DOLLAR FREE to every person attending

* FIVE ADDITIONAL DOLLARS FREE to every person who stays to the end of the program.

"Whoever *he* is," Chesley said, offering to return the card.

"Keep it. It's probably some kind of advertising deal, you know?"

"If it is, it costs plenty of money," said Chesley. "Why, the Stadium must hold more than seventy-five thousand people. If everybody gets six bucks, why—hey, that's nearly half a million dollars!"

"Nah. Nobody's going to spend half a million," said Harry positively.

"Um," said Chesley. He finished his beer and put the card in his pocket. "I don't know," he said, "maybe I'll take a look." And why not? Because after all it was nearly twelve hours until it was time to polymerize some more molecules, and the only other place he could think of was home.

They really did give away a dollar. Somebody had hooked up gadgets to the turnstiles, and when you pushed your way through there was a click and a rattle and a dollar bill popped up through a slot like a paper towel in a restaurant washroom. It looked real, too.

There were seats down in the field, just like at a prize fight, and about where the pitcher's box usually was, there was a platform with microphones and TV cameras. There must have been plenty of people in the Bronx who enjoyed getting a dollar FREE, because the seats filled up rapidly.

Arthur was early—that was his habit; and he got a good seat. He had nothing to do but chat with his neighbors and eat. He bought himself two hot dogs and an ice cream cone. Ordinarily he was careful about his money—that is, his wife was careful about money and he was careful about his wife—but he regarded the dollar as found money, and he had every

intention of staying on to the bitter end, regardless, in order to collect the other five.

At about the time all the seats were filled he discovered that he really was going to stay on, regardless. Because as soon as the Stadium was full the gates were closed; and Chesley could see that they were being locked, and that guards were standing firmly in front of them, turning people away.

There wasn't any way out.

And then the field lights flickered and spots came on, beaming down at the platform. And a man appeared.

He *appeared*. He didn't walk quickly up the stairs, or come out from behind a curtain. He appeared. The only part of that statement that is questionable is that he was "a man." Chesley thought that, taking everything into account, he looked like a man.

But he was ten feet tall; and he had a halo that glowed all around him.

He said good evening, and his voice was heard all over the park. Maybe it was the microphones, but Chesley didn't think the sound came from the microphones; it seemed to come from the speaker himself; and the voice was odd. Not metallic. Not foreign. Not any of the words that people use to describe the voices of *people*. It sounded non-peoplish; it sounded strange.

Out of the corner of his eye Chesley saw commotion, and realized that some people were fainting. But not him. He did choke a little on the last of his ice cream cone, but he managed to get it down. Still and all, he did have a sick feeling in his stomach. It wasn't from the hot dogs.

The man said: "I am not a man."

A muffled moan from eighty thousand voices. Chesley only nodded.

"I take the form of a man in order to permit you to see me," boomed the voice. "I am your Viceroy."

A couple of hundred people, near the exits, had had all they could take. No mere five dollars was enough to make them stay. But the Viceroy was. The desperate ones jumped up from their seats, ran shouting toward the guards; and maybe the guards couldn't have stopped them, but the Viceroy could; he pointed his finger. They stopped. In fact, they were frozen. Most of them toppled over, rigid.

Arthur Chesley thought that this was very interesting.

Living with his wife had done things to his temperament; he was so unused to strong emotion that he didn't recognize it when it came. He was scared to death. His heart was beating wildly; he had violent cramps in his stomach. But since he had never been terribly afraid before, he didn't realize it.

He even tried to order a bottle of soda pop. But apparently the vendor knew more about his emotions than Chesley did; because he had disappeared.

The Viceroy went on: "I have been sent by my people to prepare this planet for their habitation."

Moans again, and another nod from Chesley. That figured, he thought; it would have to be something like that. He began to shake, and wondered why.

"I have been sent alone," boomed the voice, "because I need no aid. I myself can cope with any force your puny Earth can send against me. Singlehanded I can destroy every Army."

The audience had stopped moaning; it was stunned, or most of it was. Then the first shock began to wear off and Chesley began to hear voices. "Fake!" cried someone, and "Who're you kidding?" screamed someone else. And there were uglier noises than that, too.

"I can do some things that you do not even suspect!" cried the Viceroy in a terrible voice. "Watch, Earthlings! Watch me and see!"

He began to grow.

The eighty thousand throats rasped in unison as every person present caught his breath. The Viceroy lengthened, like a stretched string. Ten feet tall? He became fifteen feet tall—twenty feet—thirty. Not an inch broader, but he towered as high as the top of the stands themselves before he

was through. "See!" he bellowed, and the giant organ voice, nowhere near the microphones now, made the concrete walls of the Stadium shudder. "Watch now!" he commanded; and he began to broaden. Now he was a giant, not a string man; still thirty feet tall, but nearly ten feet across the shoulders, too. And then he began to shrink—only downwards, until he was a squashed butter-man, pressed down to a height that was less than his thickness, an oblate spheroid with a gross flat head at the top and gross chunky legs underneath. And then he shrank his width, until he was the same size and shape as at first.

The halo flashed orange sparks.

Mirrors? Chesley wondered. Probably it was mirrors. All the same, it was a good thing that he hadn't been able to buy that soda pop, because it would have gone down his windpipe.

The Viceroy thundered in a far-more-than-human voice: "I shall inform certain of you of what their duties will be. The rest of you may continue with your piddling little human lives—for the time being."

The halo flared violet.

"Meanwhile," rumbled the enormous voice, "do not think of resistance. It cannot succeed. I shall prove to you that I am invulnerable. Absolutely invulnerable! To weapons—"

A barrage of machine-gun fire from a battery at the side of the

speaker's stand. Bright yellowish tracers ricocheted up and out over the cringing audience.

"To poison gas—"

A man in a blue uniform climbed onto the stand and directed a flexible hose at the Viceroy. Chesley shrugged; what difference did it make? The machine-gun bullets had been all the evidence anyone really needed. But there was more:

"To fire—"

A flame-thrower squirted a flaring blob of napalm; it clung to the Viceroy's halo; flickered; went out.

"To atomic energy"—Chesley half rose—"but I shall not demonstrate that at this time, as too many of you would be casualties. Now you may go. My peace be with you."

And the halo flared white, and he was gone.

Chesley slowly joined the fleeing crowd.

Such things, Chesley realized, could be faked. But they impressed him none the less. And they impressed a lot of other people—for example, the man who went through the exit turnstile ahead of Chesley, who was in such a sweat that he raced through without stopping to pick up his five-dollar-bill, leaving it for Chesley—along with Chesley's own.

He came home with ten dollars and change and his wife, for the first time in some years, was immensely pleased.

So were a very few other persons throughout the world—nearly one half of whom had seen the Viceroy in person or on television, or had heard his voice on the radio. But even they didn't stay pleased, not for very long.

II

By the time that most of the world's population was very displeased indeed, Chesley's wife was saying—or screeching:

"Stepping stone! Now you've done it, Arthur, you've stepped your stepping stone right out of a job entirely! How are we going to face my mother, Arthur? How? I ask you, how can I go to see her in her new thirty-five-thousand-dollar house and tell her the man I married over her objections is *fired*? And what about these taxes? We can't pay them, you know that! If you were half a man you'd go to work in the V.G. like Elsie Morgenstern's husband down the block. *They* don't have to worry about where their next meal is coming from and— And what about those people that were blown up yesterday? They were out of a job. The Viceroy just killed them all, *killed* them, and I'd like to know what would happen to me if— Arthur! Now, come back here!"

Harry swabbed a damp cloth over the bar and looked up mo-

rosely. "What'll it be, Arthur? Reeky-Cola, lemon fizz, a shot of ginger ale?"

"I'll take milk," said Chesley, sliding onto a stool. It wasn't the same, of course. Taking one consideration with another, Chesley thought judiciously, the Viceroy hadn't done a bad job of reorganizing the Earth in five weeks, even if his most recent step was to abolish the production of certain synthetic rubber articles which, in turn, abolished Chesley's job. But he shouldn't have prohibited beer.

Harry poured the milk glumly and leaned on the bar, watching Chesley sip it. "You know Flaherty?" he asked. "Well, he was one of them that got it yesterday."

"Flaherty? *Ronald Flaherty?*" Chesley was shocked. "You mean he was in that bunch of out-of-work people that the Viceroy ki—"

"They was misled by corrupt agitators," Harry interrupted.

"Oh, no, Harry. I mean, Flaherty wasn't—"

"They was *misled* by corrupt agitators," Harry repeated with great emphasis, and he nodded his head toward the back of the bar. Where stacks of bottles once had been, now there was a floral display around a placard that read:

Loyalty to the Viceroy is every Earthling's first duty.

—THE VICEROY

And under the placard, a microphone.

"I see what you mean," Chesley said quickly. "Yeah, they certainly were misled by corrupt agitators."

He tasted his milk, and the milk wasn't sour—no, no milk was sour, not after the Viceroy had made a few examples of persons dealing in spoiled foodstuffs. But Chesley's thoughts were. Those fifty persons had been picketing the Viceregal Deputy Zone Commander's Headquarters, asking for jobs. And, bam, a violet flare; and they were all dead.

It didn't pay to be unemployed, that was the first conclusion he reached.

But what could he do about it? Dr. Pebrick, Chief Managing Chemist of the synthetic rubber works, had made it very clear that he was lucky to hang onto *his* job, and there was no possibility whatever that Chesley would be rehired.

He would have to get a job somewhere else. That was the second conclusion.

Chesley sighed and finished his milk. "Say, Harry," he called. "Got a *New York Times?*"

"Yeah." The barkeep pulled a folded paper out of the otherwise empty bar-tools rack under the counter. "Here."

"Thanks," said Chesley, opening it to the Help Wanted section. "And let me have a be—"

"You mean," interrupted Harry, jerking his thumb over his shoulder at the placard and the mike, "you would like another glass of

delicious, invigorating, one-hundred-per-cent pure milk, which the Viceroy recommends above all other beverages for human consumption?"

"Yes," sighed Chesley. "Another milk."

The agency was crowded, but since it was the only one in the paper that had listed in its ad, *Man, chmcl trng, admstv pos, sal open*, he had no choice but to wait out the line. It took nearly half a day, which Chesley passed, as best he could, by conversation with the others in line—guarded at first, then more and more open, until the man ahead of him happened to glance up at the picture of the Viceroy that hung on the wall over his head. He turned white; sweat broke out on his forehead; he slumped, caught himself, started to speak, and then burst out of his place in line and raced back through the long hall to the elevators.

There was a microphone under the picture.

Chesley shook his head ruefully and kept silent for the rest of the time. It didn't pay to talk too much. The Viceroy wasn't everywhere—though, being far from human, he was in an astonishing number of places at astonishing times. But his Guard, the V.G., was in even more places *all* the time. Chesley had passed one just outside the door—a man in a blinding blue uniform,

who parked blatantly near a fire hydrant and strolled away. In a matter of seconds a traffic cop caught sight of the car and charged toward it, fire in his eye and one hand dragging his summons pad out of his pocket. But then the cop caught sight of the magic letters V.G. on the place where the license plate would have been—if the Viceregal Guard bothered with license plates—and he turned pale and staggered away as though he had had a narrow escape.

Which he had.

Chesley shook his head again. It was hard to reconcile the idea of old Irv Morgenstern down-the-block with the total and awful powers of a member of the V.G. But there were too many things these days that couldn't be reconciled, he wasn't going to bother his head about them. The Viceregal Guard served a function, he supposed. That is, if the Viceroy served a function, well, then the Guard was pretty necessary. The Viceroy could reach down and strike any human, anywhere; but apparently he couldn't *find* the human who was thwarting his efforts without a little on-the-spot help from the V.G. He was perfectly capable of wiping out a whole city if it angered him—witness Omaha, in the second week of his reign—but it happened that Omaha was not the site of any of his own special projects. Most

every other city in the world did have a high-priority Viceroy's Project going—increasing the rate of births, building up human health, building cryptic objects for unknown purposes—oh, there was no limit to the things the Viceroy wanted Earth to do in preparation for the landing of his own extra-solar race. And it was the Viceregal Guard that was charged with seeing that they were done. From the moment he arrived he had been recruiting, and paying well. It was his first human helpers who had turned up at the offices of the radio and television networks with fabulous bundles of cash in their pockets, who had rented Yankee Stadium for a fantastic price; and those human helpers were now the colonels and generals and marshals and generalissimos of the V.G.

The V.G. seldom killed anybody, but they had power of life and death all the same. For—annoyingly—people kept trying to take advantage of the Viceroy. They knew it meant death to be discovered, but there were persons who complained because they couldn't afford the taxes and because they were thrown out of jobs they'd held for decades and because their homes were ripped down to make room for Viceroy's Projects. Some of the Projects didn't make all the sense in the world, Chesley thought—for example, did the Viceroy really *need* the four-

acre swimming pool he was putting up on the lots that Rockefeller Center had once inhabited? But there was no questioning them; those who questioned were punished. Others sold impure foods—the Viceroy was vehement about human health, apparently because his people were going to want plenty of good, strong servants. Others insanely sold inferior or incorrect materials to the Projects themselves. Others did forbidden research—there was a long, long list of prohibited topics. And the Viceregal Guards tracked them down, and then, as soon as the busy Viceroy could get it onto his schedule, somewhere on the Earth's face there was a *bam* and a violet flare, and another sinner had met his fate. All it took was one word from a member of the V.G., and . . . *bam*.

So it didn't pay to tangle with the V.G., because—

Chesley stopped in mid-thought, disconcerted. "What?"

Somebody was saying impatiently, "You, there! Come on, you're holding up the whole line. Next!"

"Sorry," mumbled Chesley. He had been waiting so long that it was a shock to realize he had finally gained the threshold of one of the employment agency's interviewers. He stumbled in, laid his hat on the desk, hastily picked it up again, put it on his lap and said: "I'm here about that ad in

this morning's N. Y. *Times*—"

"So," sighed the red-headed, weary-eyed girl behind the desk, "are six hundred others. But wait a minute—you're a chemist? Oh. Well—"

Chesley listened in growing consternation. Chemical training, the ad had said, administrative position. He had thought, naturally, that it would be checking over some manufacturing company's crude materials supply orders, or maybe, at the most daring, a little routine analysis. It turned out to be anything but those. It was, in fact, so different from what he had expected that it terrified him.

He stammered, "I'm s-sorry, sir—I mean, ma'am, but I don't th-think I'm qualified."

"We're the best judges of that," the interviewer told him sternly. She paused significantly. "Of course," she added, "we're not forcing the work on you. You're free to take the job or leave it, as you choose. However, if you leave it—"

She stopped there.

Chesley thought about what would happen if he refused: the loyalty investigation, the arrest, the disgrace, the report to the Viceroy, the violet flare and the *bam*.

He nodded. "Yes, ma'am," he said timidly. "You're right, ma'am. I'll take it, of course."

It seemed that there was a uniform that went with the work—a blinding blue uniform, and on

every bright chromium button were stamped the letters: V.G.

III

For a very short time Chesley's wife was impressed. She said the uniform looked nice on him, so trim and neat, and it broadened his shoulders and made him look like a soldier. And Chesley himself, when he stopped being afraid of himself, found that it scared the pants off practically everybody who saw it except other members of the V.G. For the first time in his life he felt the surge of personal power through his previously calm veins.

"But why on earth should they hire *you*?" his wife demanded. "You're not a policeman."

"They don't need policemen. They need people with chemical training, for instance. I'm a Research Investigator."

"But you're not a researcher!"

Chesley said loftily, "You don't understand. I don't *do* research, I investigate people who do research. Remember? Some kinds of research are forbidden. I check up on them, see? For instance, one of the first things I'm going to do is drop in on the rubber works. I want to talk to Dr. Pebrick."

"Your boss? About time!" his wife exclaimed. "I never thought I'd live to see it, Arthur, you getting up enough nerve to tell that fat—"

"It isn't a question of nerve, dear," he explained. "When I worked for him it was different. Now I'm a member of the V.G.—and not a private, either! No, sir." He patted his stripes proudly. "See, dear? I'm a corporal!"

"Corporal?"

He nodded triumphantly.

She asked, with a dangerous note in her voice, "Is corporal higher than major?"

Chesley was shocked. "Oh, no, dear. Major is much higher. There's sergeant, top sergeant, lieutenant, captain—"

"Major is higher?" Mrs. Chesley stamped her plump foot. "You mean," she demanded, "that you're going to have to take orders from Elsie Morgenstern's husband? Arthur, I swear, I don't think you ever take into consideration the fact that I'm entitled to some respect in this neighborhood! Oh, I can't face Elsie Morgenstern after *this*! She'll put on that cat-eats-the-canary look and —Arthur, what's my mother going to say? My sister Caroline's husband's a *lieutenant*, and he's three years younger than you, and I always thought he was the biggest— Arthur, I never should have listened to you! Stepping stones! I go through seven years of misery and scrimping on your stepping stones, and then when you finally get a chance to make a man out of yourself with a half-way decent job in the V.G., you take the first offer

they make, showing no guts, no strength, and —Arthur! Arthur, I'm warning you, don't you dare leave this house!"

Still, Chesley's first official act was to visit his old employer, and that made up for a lot. There is no need to go into details about it. Chesley was not yet used to throwing his weight around, but he knew the principles of throwing a scare into the lesser breeds, having been subjected to the technique many times, and it is of record that fifteen minutes after he had left the laboratory where he had formerly slaved, Dr. Pebrick called up his lawyer and made the will he had been putting off for ten years.

After that Chesley began to see the world.

He was amazed to see what sort of a world it was.

There are people who take seriously the pronouncements of politicians and government leaders, who realize the connection between a change of policy on bi-metallism and the fact that today or tomorrow the price of eggs will go up or bombs will fall on Nova Scotia. Chesley was not one of them. He had heard everything the Viceroy had had to say, but it simply had not registered.

For example, there was the Viceroy's long and famous General Orders Number One, which prescribed exactly what the human

race was required to do in order to make their miserable little pebble of a planet fit to be occupied by the Viceroy's race. The celebrated Para. iv (c) of those orders read:

It is contemplated that 50% of the human race will be required for maintenance duties under the occupation. Since the other 50% will not be adequate to the task of feeding the maintainers, it will be necessary to increase the adult, healthy human population as quickly as possible.

Therefore no beer; therefore no drugs; therefore no time wasted on amusements; therefore children, children, children. It was the Viceroy's orders. And the penalty for failure to comply was a violet flare and *bam*.

It had never occurred to Chesley that the flare might some day consume him. It simply didn't seem to matter. If it had been guaranteed that he *would* get it at a specific time, why, then, he might have paid some attention. But the danger was so indefinite that it seemed foolish to waste time on it.

Others were not so placid.

The old life was disintegrating. The mores of the world were changing every day—at least on paper; for what was permitted was compulsory, and nearly everything that was not compulsory was *verboten*. Artists were giving up their art ("non-essential") and musi-

cians their music ("manpower-wasting") in order to go to work on a Viceroy's Project. It was like a great war effort. And yet there was none of the self-sacrifice, none of the shared resources, that mark a people fighting a war. Everywhere there was springing up a shoddy second growth of new companies, new plants, that would somehow cash in on the great Projects. With the Viceroy creating money as he pleased, while governments stood by helpless, there was a fantastic spiral of inflation. The governments themselves were falling apart; no one would work for them. It paid off much better to be an agent of the Viceroy than to serve some possessor of minute authority like the American Government, the Russian, even the UN.

And there was one universal solvent—money.

On the first day of Chesley's employment in the V.G. he was offered a bribe. Berkeley Project Six Four Three had ordered a thousand bags of Portland cement; it was nearly half sand; the salesman grasped Chesley's hand anxiously and said, half pleading, half in contempt: "What's the difference, pal? A little sand isn't gonna hurt—saves putting the sand in later, right? Everybody's doing it." And when he took his hand away there was a thousand-dollar bill, wadded damply tight, left in Chesley's.

Chesley walked out of there and made a little note in his book; that was the first rule of the V.G.; anyone offering a bribe was to be reported for punishment.

But, somehow, that didn't seem to stop it. By the end of the second day he had been offered money to suppress a report on inferior steel alloy in fourteen thousand tons of I-beams; to help throw a contract to a firm that lacked plant, raw materials and employees; to change the wording of a bid specification so that a speculator could unload water-damaged organic chemicals, utterly worthless for any purpose. He was even bribed on general principles—because he was a member of the V.G., as a sort of general prophylaxis against any future illegal activities.

Chesley took his notebook in hand and reported to the District Sub-Office.

It was in a Project building—a spidery tripod a mile and a half high. Steel skeleton and blue-plastic frame, it rose on three thin legs, one planted firmly on lower Manhattan, one rooted in Staten Island, one plunging into the river off the Jersey piers. Chesley stepped into a glassy capsule at the base of the Manhattan leg and was blown by pneumatic force straight up the leg. It was a whirling, dizzying experience, but he could catch sight of the other Project buildings scattered across the land and sea—the giant bubbly dome

over Astoria, Queens, with its revolving ruby lights; the pale, square monstrosity that floated in the ocean just off Coney Island; the sun glinting from the twenty enormous swimming pools the Viceroy had commanded all over New York and New Jersey.

Some day the Projects, all of them, would be used by the Viceroy's people, for purposes that were far outside of human understanding. But for now they belonged to the V.G., six-foot humans occupying rooms scaled for a race of no fixed size or shape, where some doors were so tiny a man had to crawl through on his belly, some ceilings so high that the lights had to be swung at the end of twenty-foot cables. Chesley slid through a narrow elliptical door marked AREA COMMANDER, saluted the first man he saw and said: "Sir, I wish to speak to Captain Carsten."

"Sit down, bud." The wind screamed and the overhead lights swung at the end of their long cables. Chesley took a seat on a curiously shallow bench at one end of the triangular room. It was full of members of the V.G., male and female, all in the blinding blue uniforms. They seemed to pay no attention to him—and even less attention to the TV repeaters that were scattered all over every room in the Project buildings, where every minute of every day the face of the Viceroy was in the screen.

ordering, exhorting, commanding his followers. Perhaps it was a recording, Chesley thought; although it seemed live, for at every twentieth word or so the Viceroy had to pause in what he was saying to glance at a memorandum handed him by a sweating human aide, or to stop, and close his eyes, and seem to concentrate for a second, while the faint halo flared around him. It was:

"—no human who dares interfere with the occupation of"—pause, while he glanced at a slip—"this miserable little planet by"—pause, while he closed his eyes and the halo glowed bright—"the invincible race I represent will escape. No, not one! And if any"—pause for another slip from another messenger—"human is presumptuous enough"—pause, while the halo flared—"to attempt to thwart my plan for"—pause again; and words and pauses and words and . . .

Chesley stopped a girl in the blue uniform. "What's he doing?" he asked.

She stared at him. "Oh, a rookie. That's how he blasts 'em, boy," she said, and hustled on. Chesley was very impressed. Imagine seeing the Viceroy in the actual act of execution! It didn't seem to be very difficult for him—and yet, Chesley thought, if you assume that one person out of a thousand needs execution every year, and that there are three billion persons

alive on the Earth, those three million annual executions must occur at an average rate of—of—of, he finally computed, one every ten seconds or so, night, day, week-ends and Sundays included. No wonder the Viceroy was harried!

"You!" barked a plump old V.G. with a lieutenant's shoulder bars. "You want to see the Captain? Come on in."

Chesley marched into an office with a soft and slanting floor and, keeping his balance with some difficulty, saluted, reported, and turned over his list of persons who had offered him bribes.

Captain Carsten stared at him in frank incredulity. "They tried to bribe you?" he asked.

"Yes, sir."

"And you—you're reporting them to me?"

"Yes, sir."

"I see." Carsten shook his head slowly, as though it were impossible to believe. And, in fact, he was baffled. He tried to clear up the confusion in his own mind. "You mean to say," he began, "that these people all offered you bribes, that you accepted the money, that you have brought the money to me here as evidence, and that you are turning their names in for punishment?"

"That's absolutely right, sir," Chesley said gratefully. He was very relieved; at first he had almost thought the captain didn't understand.

"I see," said the captain again. He picked up the pile of bills and the list of would-be bribe-givers. "There's quite a respectable sum here, Chesley," he said warmly. "And it requires a great deal of fortitude to resist keeping it. I must commend you."

"Thank you very much, sir!" Chesley felt the stirrings of pleasure in his tranquil little heart. "Shall I keep them under observation?"

"Eh? Keep who?"

"The people on the list, sir."

"Oh." The captain pursed his lips. "No," he said, "that won't be necessary. I'll take over, Chesley. I see that you have much more uncommon abilities than I had suspected, so that I think perhaps you should be transferred to—to a more advanced position." He nodded briskly, wadded up the money and put it in his pocket. "I'll keep the, uh, evidence. Pending the proper time, of course. Now, Chesley, dismissed!"

Chesley marched out, feeling quite good—until a couple of days later, when he made another routine check and came across the Portland cement salesman. "You?" Chesley said, astonished. "But I thought—"

"You thought what, pal?" the salesman snarled.

"I thought—" Chesley had been going to say that he'd thought the salesman would long since have passed on, accompanied by a violet

flare and a *bam*. But obviously that hadn't happened, and he floundered.

"Ah," snarled the salesman, "you give me a pain. A thousand bucks wasn't enough for you, huh? You had to pass me on to Carsten, huh? What do you think I was bothering with *you* for? Just because I couldn't afford his prices—and now he's got me down for a weekly payoff, and, believe me, it isn't any measly grand. Get out of here, you! I don't have to bother with you small-timers any more—now that I'm paying for real protection, I'm going to get it!"

Truly, thought Chesley in his analytical way, the V.G. was a strange and educational organization.

But time went on, and Chesley's ears slowly dried, and it was only a matter of months before he had his own list, and more than five hundred lesser V.G.s under him to help in the collections. For the mortality rate among the human population itself was high, but among that segment of the race that had joined the V.G., it was fabulous. Nearly one execution out of ten, Chesley discovered with interest, was of a V.G.—V.G. caught conspiring to defraud, V.G. caught suborning forbidden research, V.G. under the influence of alcohol, V.G.—more often than any of these—the victim of a de-

sire for advancement on the part of one of his subordinates.

For if mortality was rapid, so was advancement. It was Major Chesley now, and the old apartment up the block from Mrs. Morgenstern was only a memory; the Chesleys lived in a penthouse over a pagoda-shaped Project of orange crystal.

The Viceroy could have blotted out his enemies *en masse* only at the cost of blotting out the human race, and forfeiting the work he wanted done. For his own sake, he had to ferret out hostile groups and individuals and destroy them without destroying too many of the others at the same time. Hence, he needed his international army, the V.G.

But the army was shot through with corruption. Men who spied on their fellow men for the sake of an inhuman ruler had little of ordinary human feelings. They robbed and reported for annihilation with relative impunity—at least until they aroused the opposition of other V.G. men. Then they themselves were robbed and reported. And another violet flare and *bam*.

Captain Carsten—now Colonel Carsten—got it one fine day. Major Morgenstern—now General Morgenstern—found out he was on a marshal's list, and hanged himself in panic. Major Chesley watched and profited; he made it a point never, never to interfere with an-

other V.G. man, at least one of superior rank.

And so, when the Viceroy at last was impelled to act in enormous wholesale fashion, Major Chesley ceased being even a major; there was a renewed loyalty check and a doubling of the hidden microphones; Major Chesley became Generalissimo Chesley.

The long procession of stepping stones, it seemed, had finally led to a goal.

IV

Chesley's wife cooed:

"Arthur, you look so *handsome*! Just think, my Arthur's a generalissimo! Oh, if only Elsie Morgenstern's husband down the block could see you now!"

"I have to go," Chesley said.

"Oh, don't go yet, Arthur. Let me look at you. My, blue is *your* color. And those comets on your shoulder—Arthur, you're handsomer than you were when we were married." She giggled.

Chesley said uneasily, "Dear, I *must* go. The Viceroy himself has sent for me."

"The Viceroy?" His wife's mouth went wide with surprise—yes, and with fright. "Arthur! You mean—"

"I only know that he sent for me," Chesley said.

"But that's what happened with Elsie Morgenstern's husband, Arthur! The Viceroy sent for him,

and Elsie said the poor man knew it was—And he just couldn't bear the suspense, knowing that he was on somebody's list, so he— Arthur, please don't go. Stay here, Arthur! Oh, Arthur, I knew all this would end up with some kind of terrible thing. How can I tell my mother if you— And think of the disgrace! My own husband blasted by the Viceroy for disloyalty! I won't be able to hold up my head. Just when the other ladies were— Arthur, come back here!"

But it wasn't his death sentence that was being passed after all. Chesley had been pretty sure it wasn't that—though there were uneasy moments, waiting in the purplish gloom of the Viceroy's own outer office, when he would have given his blue V.G. uniform and his generalissimo's comets cheerfully for the privilege of once again being an ordinary common citizen in an ordinary world.

But it wasn't bad news; it was good; how good, Chesley would never have dared to guess.

The Viceroy's personal aide-de-camp, white-faced, sweating, let Chesley in. Chesley walked past the man and thought objectively how terrible it must be to be exposed continually to the ultimate wrath of the Viceroy—and how short the life expectancy of a personal aide had come to be, with the average duration in the post running to not much over a week.

But then he was in the presence of the Viceroy, and he had no time to think of things concerning mere humans.

And yet—the Viceroy himself, even, had an aura of humanity that was new and strange.

It wasn't that he *looked* human. His features were twice the size of a man's, and utterly blank, carved out of heartless granite, as though it weren't worth the trouble to him of assuming an expression. It wasn't as though he *sounded* human—his voice had a curious mechanical harshness, more so than ever before, as though he had not bothered to dress it up with earthly intonations and overtones.

But the Viceroy was . . . *upset*.

That was the only word to express it. He had blazed with angry power during the reorganization of the V.G. that brought Chesley his comets, and the blaze was still smoldering. There was worry and hatred in his bearing—hatred at the stupid illogic of this mindless human race that was incapable of resisting him, and yet ran the highest risks of annihilation for the sake of making a few filthy dollars. There was passion surrounding the Viceroy; and Chesley was very nearly afraid.

He saw death pervading the very air in front of him, death and annihilation. And yet it was not directed at Chesley, for what the Viceroy said, when he took time at last from reading memos and

pausing to make the effort of will that, somewhere on the face of the earth, blasted another enemy with a violet flare, was:

"You once refused a bribe."

Chesley had to think back—it was that hard to remember. Then he recalled the scene in Captain Carsten's office, and realized that even there the Viceroy had had his hidden microphones or his spies. He said, "That's true."

The Viceroy went on in a harsh and somber voice: "You no longer refuse them."

"That's true too," admitted Chesley.

"Yes," said the Viceroy, and was silent for a moment while he read a memo and squelched another enemy. Then he said: "You need not refuse bribes. But do not fail to be logical. From this moment, you are chief of all my Guard."

And that was the end of the interview.

A human dictator might have appealed for personal loyalty. What the Viceroy wanted, Chesley realized, was clarity of view—the realization that Chesley's own selfish interests were best served by doing whatever he could for his master, the Viceroy.

Chesley left, understanding the Viceroy's difficulty:

The Viceroy had no time.

He had to be all over the world, punishing and searching out offenders. And for all his superior power, he was baffled and enraged

when human beings risked his anger for—to him—stupid reasons.

Chesley didn't know much about fear from personal experience, since his mind had never worked that way. But he had learned to recognize its objective symptoms in others: Baffled rage; extending outward; puzzlement; inability to comprehend the nature of a danger.

In other words—what the Viceroy himself was now demonstrating.

Chesley, being no coward, was also no hero. He had never thought of himself as courageous, and yet, the very next week, he did a courageous thing.

A report came to his desk:

Captain-General Gorminster, aide-de-camp to the Viceroy, has accepted a bribe for destroying a memorandum relating to the disloyalty of five members of the San Diego Area Command.

Chesley's job was to initial it, return it for filing, and inform the Viceroy of its contents—directly, since the man accused was the Viceroy's own aide-de-camp. It was Gorminster's death sentence.

Chesley did nothing of the kind. He initialed it, thought it over, and tucked it in a pocket.

And two days later, he found the Viceroy's aide-de-camp dragging himself, shaking, up the long

humped ramp that led toward the purplish recesses of the headquarters. Chesley stopped him.

"General Gorminster," he said, "take a look at this, will you?"

Gorminster glanced at it impatiently, then snatched it from Chesley's hands, read it and reread it, stared for a horrified moment at Chesley, and seemed about to faint.

"I haven't turned it in," said Chesley.

Gorminster only stared. He was a pitiable sight, no courage left to him and no strength.

"And I am not going to," Chesley went on. "I think it is an unjust accusation."

"Oh, thank you," gasped Gorminster.

"I only want you to remember," said Chesley, "that I have helped you. I may need help myself sometime."

"I understand," said Gorminster after a moment, and then he smiled. It was a workable arrangement—the supreme commander of the V.G. and the Viceroy's personal aide, working hand-in-glove; they could protect each other indefinitely.

Chesley returned to his work feeling more comfortable than he had for some time.

That was the sole act of disloyalty of which he was guilty. He made up for it by intensifying his investigation of the rest of the Viceregal Guard. Half the mem-

bers of the V.G. were always busy investigating the other half, and each half was likewise split into quarters that investigated each other. Only rarely did Chesley report directly that any individual or group was disloyal, for he had seen enough to know that the most dangerous thing a man in his uncertainly powerful position could do was to make enemies.

But he saw to it that the right members of the warring factions discovered the right damning evidence on their opponents. And then it was only a matter of piously transmitting the initialed reports; and the Viceroy himself blasted the offenders, and Chesley could wash his hands like any Pilate.

He worked hard.

Under the new regime, feeling for others was a luxury and only selfishness was a virtue. But selfishness precluded any genuine loyalty to a ruler who ruled by fear alone. Thus greed arose to combat fear and to nullify it; and disloyalty was inevitable.

The task of investigating and reporting was endless and exhausting. Chesley began to feel it draining him after the first few days in his mighty new office. And yet, he wondered, what must it be for the Viceroy? He spent more and more time with that inhuman tyrant, and saw that humanity—that is, worry and doubt—were burgeoning in him like toadstools after a spring rain. Chesley could trust no

one fully. The Viceroy could trust no one at all.

The Viceroy spent all his time doing what Chesley did—but more quickly, more efficiently, without human limitations on his ability to think and act. And without rest.

Chesley began to sense that something might happen—something that the Viceroy feared.

But it would not happen, he knew, of itself.

He thought, and remembered, and was careful. It must be made to happen—and he must arrange it.

He continued with his work.

The number of reports he sent in increased. He discovered disloyalty everywhere—

It was only a matter of time until someone somehow reported Chesley himself. And one day when Captain-General Gorminster, in a tottering panic, hurried to Chesley's side with a summons from the Viceroy himself—and dared everything to whisper, "It's the Ottawa Area Chief! He's reported you direct—I couldn't stop it!"—Chesley knew that the time had come.

There was the Viceroy, twelve feet tall, shimmering with a golden fire-flecked glow. He was shouting into a television scanner connected with Sydney, Australia; in his hand was a sheaf of denunciations: he paused, spoke, paused

again in the moments while Chesley was waiting, and each pause was an execution.

The Viceroy spoke, his face granite: "You are a spy in my Guard."

Chesley felt his stomach knotted into hard lumps and wondered what he had eaten that disagreed with him so; he found that he was sweating and was astonished, for it was not warm. He said: "I have followed your orders. I have acted loyally."

"Loyally!" Chesley felt the seething of inhuman rage that radiated out from the Viceroy. "You obeyed because you knew obedience would harm me!" cried the Viceroy. "Yours is a race of worms! You know no reason and no logic!"

It was true.

The realization hit Chesley and hit him hard: All of his obedience, all of his following orders, had had the effect of damaging the Viceroy's cause. For the Viceroy's orders had been to root out disloyalty and destroy it; and the nature of the Viceregal Guard was that disloyalty had to be its hallmark, treachery its sign.

What other sort of person would join the V.G.?

And so, the more the officers spied and reported, the weaker the organization became. Blue-uniformed turncoats remained turncoats. The task of rooting out corruption from the Guard was impossible—by definition: for corrup-

tion was its source and spawning ground.

And knowing that, Chesley knew one more thing: He knew at last that he was afraid.

He said: "You yourself created an illogical situation."

The Viceroy stopped in mid-breath. Death was very near for Chesley, but at least the Viceroy was listening. Was it his imagination, or did the Viceroy seem to be swelling slightly—as though the strain of carrying a planet on his inhuman shoulders was beginning to tell? Chesley said, "You hoped to rule us by fear—but fear destroys you. When we are afraid, we act irrationally; and we are too many for you."

"I shall destroy your filthy race!"

"Oh," said Chesley, calm now, nodding, "yes, you will. You will destroy us, Viceroy. In fact, you are destroying us now. And what then? If you destroy us all, there will be no servants for your people—and then *you* will be punished."

The giant figure wavered like smoke. It cried wordlessly—or in words that were not human; and then it said: "Stop!"

"Why?" asked Chesley. "You will blast me anyhow—you can only do it once, you know. That's your basic error, Viceroy, you have only one punishment for any crime, so why should a man be content with a small crime? Might as well commit a large one. No, if

you had been logical, you might have—"

"Stop!" bawled the vast, inhuman voice, and the purple-lined room shook. "Stop, man!"

He *was* swelling with anger, Chesley noted with a surgeon's detachment. Ah, what was the difference? He went on, finishing out his thought, confident that it would be the last thought he would have in this life: "And so, by failing to be logical, you have failed in your mission. It is you who are disloyal, Viceroy. You have betrayed your people. You can never prepare the Earth for their coming."

"Disloyal?" boomed the enormous voice.

Chesley nodded and closed his eyes.

There was a pause—

And, even through his closed eyes, a violet flare—

And a crash louder than anything Chesley had ever heard. This is dying, he thought; but then he opened his eyes and it was not.

It was the Viceroy who had blasted himself; disloyalty had to be punished; there was only one punishment; logic required that it be administered. The Viceroy's broken body lay sprawled across the floor, shattered from within under the pressure of a storm of uncontrollable energy. It was not destroyed completely, as any human body would have been; and

in death it was no longer human at all.

There was plenty of money in the vaults of the Viceregal Guard, and plenty of time to take it and get away, before any other human dared approach the Viceroy's inner headquarters. Quickly home, quickly with his wife to the airport, quickly in a V.G. plane, with a pilot he could trust, flying south high and fast. And his wife was saying:

"But Arthur, if the Viceroy's dead and the V.G. is going to be out of existence as soon as the people find out about it, then what will we do? You'll be out of a job, and— And if the rest of the race will be trying to lynch the V.G., like you say, then how will we be safe? Don't you ever think of me, Arthur? You can grow a mustache and change your name—but what about Mother? How will I ever dare— And why must we take that filthy trunk? I don't know what you've got in it, but I simply cannot abide the smell of it, and— Arthur! You're not paying attention!"

Chesley said wearily, "Don't worry about it, dear. Look."

He opened the briefcase and showed her the stacks of bills it contained. "But—but that's stealing!" she cried.

He said, "It's my own money, honestly grafted. Besides, it won't

be good for anything once the governments take over again. But meanwhile it will buy us a place to live, and a stock of food to see us through, and a laboratory."

"A *laboratory*?" His wife looked as though she had at last realized her husband had gone utterly mad. "You mean—research? That stuff in the trunk?"

He nodded. "Those are the fragments of the Viceroy's body. If I can find out what he was made of, I think I can find out how he was able to blast people—and then we'll be ready for the next Viceroy his race sends down. If they ever send another. We know that the blast works on them as well as on us—he proved that." He smiled, and pointed down to the palm-fringed airfield which they were circling for a landing. "Our new home," he said.

There was much more that he could have said—for example, that when he had learned the secret of the Viceroy's blast he could, if he wished, rule the world as the Viceroy had; or that with a few other little items he had looted from the Viceroy's quarters they could be fabulously wealthy all the years of their lives. But it was not Chesley's way to be communicative, particularly with his wife; and all that he did say was:

"So you see?"

That job was a stepping stone, after all."

Just a year ago I introduced Theodore Sturgeon's And Now the News . . . by warning you that it might be neither science fiction nor fantasy but "a story outside of any ordinary commercial category, a story that creates its own genre." The story (now in THE BEST FROM F&SF: SIXTH SERIES) proved to be one of the most popular of the year; and I'm encouraged to believe that F&SF can—perhaps even should—once in a while break away from precisely defined categories to publish a story that can be described only as "strange" and "good," and that is so commercially unclassifiable as to be anathema to more rigid magazines. Like this new gem from one of the finest living writers of fantasy . . . although whether or not she has this time written a fantasy is a disturbing question that may long haunt you.

The Missing Girl

by SHIRLEY JACKSON

SHE WAS HUMMING, TUNELESSLY, moving around somewhere in the room stirring things gently, and always humming. Betsy tightened her shoulders over the desk and bent her head emphatically over her book, hoping that her appearance of concentration would somehow communicate a desire for silence, but the humming went on. Debating a dramatic gesture, a wild throwing of the book to the floor, a shout of annoyance, Betsy thought as she had so often before, but you *can't* be cross with her, you just *can't*, and she bent further over her book.

"Betsy?"

"Um?" Betsy, still trying to look as though she were studying, realized that she could have described every movement in the room until now.

"Listen, I'm going out."

"Where? At this time of night?"

"I'm going out anyway. I've got something to do."

"Go ahead," Betsy said; just because one could not be cross, one need not necessarily be interested.

"See you later."

The door slammed and Betsy, with relief and a feeling of freshness, went back to her book.

It was not, as a matter of fact, until the next night that anyone

asked Betsy where her roommate had gone. Even then it was casual, and hardly provoked Betsy to thought: "You all alone tonight?" someone asked. "She out?"

"Haven't seen her all day," Betsy said.

The day after that Betsy began to wonder a little, mostly because the other bed in the room had still not been slept in. The monstrous thought of going to the Camp Mother occurred to her ("Did you *hear* about Betsy? Went tearing off to old Auntie Jane to say her roommate was missing, and here all the time the poor girl was"), and she spoke to several other people, wondering and curious, phrasing it each time as a sort of casual question; no one, it turned out, had seen her roommate since the Monday night she had told Betsy "See you later," and left.

"You think I ought to go tell Old Jane?" Betsy asked someone on the third day.

"Well . . ." consideringly. "You know, it might mean trouble for *you* if she's really missing."

The Camp Mother, comfortable and tolerant and humorous, old enough to be the mother of any of the counselors, wise enough to give the strong impression of experience, listened carefully and asked, "And you say she's been gone since Monday night? And here it is Thursday?"

"I didn't know what to do," Betsy explained candidly; "she could have gone home, or . . ."

"Or . . .?" said the Camp Mother.

"She said she had something to do," Betsy said.

Old Jane pulled her phone over and asked, "What was her name again? Albert?"

"Alexander. Martha Alexander."

"Get me the home of Martha Alexander," Old Jane said into her phone, and from the room beyond, in the handsomely paneled building which served as the camp office and, at the other end, as kitchen, dining room and general recreation room, Old Jane and Betsy could hear the voice of Miss Mills, Old Jane's assistant, saying irritably, "Alexander, Alexander," as she turned pages and opened filing drawers. "Jane?" she called out suddenly, "Martha Alexander, from . . .?"

"New York," Betsy said. "I *think*."

"New York," Old Jane said into her phone.

"Righto," Miss Mills said from the other room.

"Missing since Monday," Old Jane reminded herself, consulting the notes she had made on her desk pad. "Said she had something to do. Picture?"

"I don't think so," Betsy said uncertainly. "I may have a snapshot somewhere."

"Year?"

"Woodsprite, I *think*," Betsy said. "I'm a woodsprite, I mean, and they usually put woodsprites in with woodsprites and goblins in with goblins and senior huntsmen in with—" She stopped as the phone on Old Jane's desk rang and Old Jane picked it up and said briskly, "Hello? Is this Mrs. Alexander? This is Miss Nicholas calling from the Phillips Educational Camp for Girls Twelve to Sixteen. Yes, that's right. . . . Fine, Mrs. Alexander, and how are *you*? . . . Glad to hear it. Mrs. Alexander, I'm calling to check on your daughter. . . . Your *daughter*. Martha. . . . Yes, that's right, Martha." She raised her eyebrows at Betsy and continued, "We're checking to make sure that she's come home or that you know where she is . . . yes, where she is. She left the camp very suddenly last Monday night and neglected to sign out at the main desk and of course our responsibility for our girls requires that even if she has only gone home we must—" She stopped, and her eyes focused, suddenly, on the far wall. "She is not?" Old Jane asked. "Do you know where she is, then? . . . How about friends? . . . Is there anyone who might know?"

The Camp Nurse, whose name was Hilda Scarlett and who was known as Will, had no record of Martha Alexander in the camp infirmary. She sat on the other side

of Old Jane's desk, twisting her hands nervously and insisting that the only girls in the infirmary at that moment were a goblin with poison oak and a woodsprite with hysterics. "I suppose you *know*," she told Betsy, her voice rising, "that if you had come to one of us the *minute* she *left* . . ."

"But I didn't *know*," Betsy said helplessly. "I didn't know she was gone."

"I am afraid," said Old Jane ponderously, turning to regard Betsy with the air of one on whom an unnecessary and unkind burden has been thrust, "I am very much afraid that we must notify the police."

It was the first time the chief of police, a kindly family man whose name was Hook, had ever been required to visit a girls' camp; his daughters had not gone in much for that sort of thing, and Mrs. Hook distrusted night air; it was also the first time that Chief Hook had ever been required to determine facts. He had been allowed to continue in office this long because his family was popular in town and the young men at the local bar liked him and because his record for twenty years, of drunks locked up and petty thieves apprehended upon confession, had been immaculate. In a small town such as the one lying close to the Phillips Educational Camp for Girls Twelve to Sixteen, crime is apt to take its

form from the characters of the inhabitants, and a stolen dog or broken nose is about the maximum to be achieved ordinarily in the sensational line. No one doubted Chief Hook's complete inability to cope with the disappearance of a girl from the camp.

"You say she was going somewhere?" he asked Betsy, having put out his cigar in deference to the camp nurse, and visibly afraid that his questions would sound foolish to Old Jane; since Chief Hook was accustomed to speaking around his cigar his voice without it was malformed, almost quavering.

"She said she had something to do," Betsy told him.

"How did she say it? As though she meant it? Or do you think she was lying?"

"She just *said* it," said Betsy, who had reached that point of stubbornness most thirteen-year-old girls have, when it seems that adult obscurity has passed beyond necessity. "I *told* you eight times."

Chief Hook blinked and cleared his throat. "She sound happy?" he asked.

"Very happy," said Betsy. "She was singing all evening while I was trying to write in my Nature Book, is how I remember."

"Singing?" said Chief Hook; it was not possible to him that a girl upon the very edge of disappearance had anything to sing about.

"Singing?" said Old Jane.

"Singing?" said Will Scarlett. "You never told *us*."

"Just sort of humming," Betsy said.

"What tune?" said Chief Hook.

"Just *humming*," Betsy said. "I *told* you already, just *humming*. I nearly went crazy with my Nature Book."

"Any idea where she was going?"

"No."

An idea came to Chief Hook. "What was she interested in?" he asked suddenly. "You know, like sports, or boys, or anything."

"There are no boys at the Phillips Educational Camp for Girls," Old Jane said stiffly.

"She could have been *interested* in boys, though," Chief Hook said. "Or—like, well, books? Reading, you know? Or baseball, maybe?"

"We have not been able to find her Activity Chart," the camp nurse said. "Betty, what recreational activity group was she in?"

"Golly." Betty thought deeply, and said "Dramatics? I think she went to Dramatics."

"Which nature study group? Little John? Eeyore?"

"Little John," said Betsy uncertainly. "I *think*. I'm pretty sure she was in Dramatics because I think I remember her talking about *Six Who Pass While the Lentils Boil*."

"That would be Dramatics," Old Jane said. "Surely."

Chief Hook, who had begun to feel that this was all unnecessarily confusing, said, "What about this singing?"

"There's singing in *Six Who Pass While the Lentils Boil*," Will Scarlett said.

"How about boys?" said Chief Hook.

Betsy thought again, remembering as well as she could the sleeping figure in the other bed, the soiled laundry on the floor, the open suitcase, the tin boxes of cookies, the towels, the facecloths, the soap, the pencils . . . "She had her own clock," Betsy volunteered.

"How long have you roomed together?" Old Jane asked, and her voice was faintly sardonic, as though in deference to Chief Hook she were forced to restrain the saltier half of her remark.

"Last year and this year," Betsy said. "I mean, we both put in for rooms at the same time and so they put us together again. I mean, most of my friends are senior hunters and of course I can't room with them because they only put senior hunters with—"

"We know." Old Jane was beginning to sound shrill. "Any mail?"

"I don't know about that," Betsy said. "I was always reading my own mail."

"What was she wearing?" Chief Hook asked.

"I don't know," Betsy said. "I

didn't turn around when she left." She looked from Chief Hook to Will Scarlett to Old Jane with a trace of impatience. "I was doing my *Nature Book*."

A search of the room, from which Betsy abstained and which was carried on with enthusiasm by Old Jane and Will Scarlett and with some embarrassment by Chief Hook, showed that after Betsy's possessions had been subtracted from the medley, what was left was astonishingly little. There was a typed script of *Six Who Pass While the Lentils Boil*, and a poorly done painting of Echo Lake, which was part of the camp. There was a notebook, labeled, like Betsy's, "Nature Book," but it was unused, lacking the pressed wildflowers and bluejay feathers; there was a copy of *Gulliver's Travels* from the camp library, which Old Jane felt might be significant. No one was able to tell certainly what she had been wearing, because the clothes in the closet were mostly Betsy's, and jackets or overshoes left in the room by Betsy's friends. In the drawers of the second dresser were a few scraps of underwear, a pair of heavy socks, and a red sweater which Betsy was fairly sure belonged to a woodsprite on the other side of the camp.

A careful checkup of Recreational Activity lists showed that while she was listed for dramatics and nature study and swimming,

her attendance at any of them was dubious; most of the counselors kept slipshod attendance records, and none of them could remember whether any such girl could have come on any given day.

"I'm almost sure I remember *her*, though," Little John, an ardent girl of twenty-seven who wore horn-rimmed glasses and tossed her hair back from her face with a pretty gesture that somehow indicated that winters she wore it decently pinned up, told Chief Hook. "I have an awfully good memory for faces, and I think I remember her as one of Rabbit's friends and relations. Yes, I'm sure I remember her, I have a good memory for faces."

"Ah," said the librarian, who was called Miss Mills when she was secretary to Old Jane, and The Snark when she was in the library, "one girl is much like another, at *this* age. Their unformed minds, their unformed bodies, their little mistakes; we, too, were young once, Captain Hook."

"Hell," said the muscular young woman who was known as Tarzan because she taught swimming, "did you ever look at fifty girls all in white bathing caps?"

"Elm?" said the nature study counselor, whose name was Bluebird. "I mean, wasn't she an elm girl? Did a nice paper on blight? Or was it the other girl, Michaels? Anyway, whichever one it might

have *been*, it was a nice job. Out of the ordinary for *us* you know; remember it particularly. Hadn't noticed either of the girls to speak of—but if she's really gone, she might be up on Smoky Trail looking for fern; want the girls to make a special topic of fern and mushroom." She stopped and blinked, presumably taking in a new supply of chlorophyll. "Fern," she said. "Pays to know plenty about fern."

"Few of them have any talent anyway," the painting counselor said. "In any of the progressive schools *this* sort of thing—" She gestured tiredly at the canvases propped up against tree stumps or stacked upon a rock, and moved her shoulders nervously under her brand new blue-and-yellow checked shirt. "Interested *psychologically*, of course," she added quickly. "If I remember this girl, she did sort of vague stuff, almost *unwilling*. Rejection, almost—if I can find a picture you'll see right away what I mean." She poked unenthusiastically among the canvases stacked on the rock, pulled her hand back and said "Why did I ever—" wiping wet paint off on her blue jeans. "Funny," she said, "I could have taken an oath she had a canvas around here somewhere. Sort of vague stuff, though—no sense of design, no eye."

"Did she *ever*," Chief Hook asked Betsy, "ever ever *ever* mention any place she might want to

go? Some foreign country, maybe?"

Old Jane's voice had an odd tone. "The parents are arriving tomorrow."

Chief Hook rubbed his forehead nervously. "Lost a hunter last fall on Bad Mountain," he suggested.

It was decided to search Bad Mountain, and then, unexpectedly, a house-to-house canvas along the road leading to Bad Mountain uncovered an honest clue. A housewife, glancing out her window to see if her husband were coming home from a poker game, had seen, she thought, the figure of a girl moving along the road, lighted occasionally by the headlights of passing cars.

"I couldn't *swear* it was a girl, though," the housewife persisted nervously. "That is, nights when Jim is out playing I go to bed and this night I was only up on account we had fried clams for supper and I like clams but they don't—"

"What was she wearing?" Chief Hook demanded.

The woman thought. "Well," she said finally, "the reason I figured she was one of those girls from the camp was she was wearing pants. But then, it could have been a man, you see? Or a boy. Only somehow I sort of figured it was a girl."

"Did she have on a coat? Hat?"

"A coat, I think," the woman said, "leastways, one of those short

jackets. She was going up the road towards Jones Pass."

Jones Pass led to Bad Mountain. It was not possible to get a picture of the girl; the picture on her camp application blank was so blurred that it resembled a hundred other girls in the camp; it was assumed, however, from the picture, that she had dark hair. A man was discovered who had given a ride to a girl hitchhiking on the road to Jones Pass; she had dark hair and was wearing blue jeans and a short tan leather jacket.

"I don't think she was a *camp* girl, though," the man added earnestly, "not the way she talked, she wasn't any girl from Phillips Camp, not *her*," he said, and looked at Chief Hook. "Bill, you remember that youngest girl over to Ben Hart's?"

Chief Hook sighed. "You see anyone else, driving down the road?" he asked. The man shook his head emphatically.

One of the Junior Counselors at the camp, who went by the name of Piglet, had been driving home late from town that night and at one point in the road near Jones Pass had had the clear impression of someone ducking behind a tree into the shadows. She was unable to say whether or not it had been a girl, or even whether it had been a person, but Chief Hook questioned her remorselessly.

"Can you face this girl's parents

and honestly tell them you never lifted a finger to save her?" he demanded of Piglet. "That innocent girl?"

Will Scarlett had shut herself into the infirmary and refused to let go of the phenobarbital; it was announced that she could not be disturbed. The press agent for the camp was taking all calls and managing the general search. Newspaper reporters were encouraged, but the seventeen-year-old son of the owner of the local paper was given first chance at all new developments; it occurred to this young man that a search be made over Bad Mountain by helicopter and the camp went to tremendous expense to import one, although its six-day tour of the mountains showed nothing and the son of the newspaper owner subsequently informed his father that he preferred having a plane to inheriting the paper, which went to a distant cousin. It was said that the girl had turned up in a town seventy-five miles away, dead drunk and trying to get a job in a shoe store, but the proprietor of the shoe store was unable to identify her picture and it was later proven that the girl in question was actually the daughter of the mayor of that town. The widowed mother of the missing girl was prostrate with grief and under the care of a physician, but her uncle arrived at the camp and took personal

charge of the search. The girls from the camp, led by the counselor in nature study and the senior huntsmen, had already gone over the mountain, looking for bent twigs and rock signs, but without success, although they had the assistance of chosen boy and girl scouts from the town. It was afterwards told that Old Jane, indefatigable in leather puttees and a striped bandana and known to be extraordinarily susceptible to cold, had fallen down dead drunk in front of Chief Hook and had had to be carried home on a stretcher hastily improvised by the boy scouts, leading many people to believe that the girl's body had been found.

In the town it was generally believed that the girl had been killed and "You know" and her body buried in a shallow grave somewhere east of Jones Pass, where the woods were deepest and ran downhill and for miles along the edge of Muddy River; knowing folk in town who had hunted the pass and Bad Mountains were quoted as saying that it would be mighty easy for anyone to miss a body in them woods, go ten feet off the path and you're lost, and the mud that deep already; it was generally conceded in the town that the girl had been followed in the darkness by a counselor from the camp, preferably one of the quiet ones, until she was out of sight or sound of

help. The townspeople remembered their grandfathers had known of people disposed of in just that way, and no one had ever heard about it, either.

In the camp it was generally believed that one of the low bloods around the town—and try to match them for general vulgarity and insolence, and the generations of inbreeding that had led to idiocy in half the families and just plain filth in the rest—had enticed the girl off into an as-sig-nation on the mountain, and there outraged and murdered her and buried her body. The camp people believed that it was possible to dispose of a body by covering it with lime—heaven knew these country farmhands had enough lime in a barn to dispose of a dozen bodies—and that by the time the search started there wasn't enough left of the body to find. The camp people further believed that it was no more than you might expect of a retarded village in an isolated corner of the world, and they thought you might go far before you met up with a lower and a stupider group of clods; they pointed with triumph to the unusual lack of success of the Camp Talent Show early in the summer, to which the townspeople had been invited.

On the eleventh day of the search Chief Hook, who perceived clearly that he might very well lose his job, sat down quietly for

a conference with the girl's uncle, Old Jane, and Will Scarlett, who had emerged from the infirmary on the ninth day, to announce that she had for a long time been renowned as a minor necromancer and seer, and would gladly volunteer her services in any possible psychic way.

"I think," said Chief Hook despondently, "that we might as well give it up. The boy scouts quit a week ago, and today the girl scouts went."

The girl's uncle nodded. He had gained weight on Mrs. Hook's cooking and he had taken to keeping his belt as loose as Chief Hook's. "We haven't made any progress, certainly," he said.

"I told you to look under the fourth covered bridge from the blasted oak," said Will Scarlett sullenly. "I *told* you."

"Miss Scarlett, *we* couldn't find no blasted oak," Chief Hook said, "and we looked and looked—No oaks in this part of the country at all," he told the girl's uncle.

"Well, I told you keep looking," said the seer. "I told you also look on the left-hand side of the road to Exeter."

"We looked there, too," Chief Hook said. "Nothing."

"You know," said the girl's uncle, as though it were a complete statement. He passed his hand tiredly across his forehead and looked long and soberly at Chief Hook and then long and

soberly at Old Jane, who sat quietly at her desk with papers in her hands. "You know," he said again. Then addressing himself to Old Jane and speaking rapidly, he went on, "My sister wrote to me today, and she's very upset. Naturally," he added, and looked around at Old Jane, at Will Scarlett, at Chief Hook, all of whom nodded appreciatively, "but listen," he went on, "what she says is that of course she loves Martha and all that, and of course *no* one would want to say anything about a girl like this that's missing, and probably had something horrible done to her . . ." He looked around again, and again everyone nodded, "But she says," he went on, "that in spite of all that . . . well . . . she's pretty sure, what I mean, that she decided against Phillips Educational Camp for Girls. What I *mean*," he said, looking around again, "she has three girls and a boy, my sister, and of course we both feel *terribly* sorry and of course we'll still keep in our end of the reward and all that, but what I *mean* is . . ." He brushed his hand across his forehead again. ". . . what I mean is this. The oldest girl, that's Helen, she's married and out in San Francisco, so that's *her*. And—I'll show you my sister's letter—the second girl, that's Jane, well, *she's* married and *she* lives in Texas somewhere, has a little boy about two years old.

And then the third girl—well, *that's* Mabel, and she's right at home with her mother, around the house and what not. Well—you see what I mean?"

No one nodded this time, and the girl's uncle went on nervously, "The boy, *he's* in Denver, and his name is—"

"Never mind," said Chief Hook. He rose wearily and reached into his pocket for a cigar. "Nearly supper time," he said to no one in particular.

Old Jane nodded and shuffled the papers in her hand. "I have all the records here," she said. "Although a girl named Martha Alexander applied for admission to the Phillips Educational Camp for Girls Twelve to Sixteen, her application was put into the file marked 'possibly undesirable' and there is no record of her ever having come to the camp. Although her name has been entered upon various class lists, she is not noted as having participated personally in any activity; she has not, so far as we know, used any of her dining room tickets or her privileges with regard to laundry and bus services, not to mention country dancing. She has not used the golf course nor the tennis courts, nor has she taken out any riding horses. She has never, to our knowledge, and our records are fairly complete, sir, attended any local church—"

"She hasn't taken advantage of

the infirmary," said Will Scarlett, "or psychiatric services."

"You see?" said the girl's uncle to Chief Hook.

"Nor," finished Old Jane quietly, "nor has she been vaccinated or tested for any vitamin deficiency whatsoever."

A body which might have been Martha Alexander's was found, of course, something over a year later, in the late fall when the first light snow was drifting down. The body had been stuffed away among some thorn bushes, which none of the searchers had cared to tackle, until two small boys looking for a cowboy hideout had wormed their way through the thorns. It was impossible to say, of course, how the girl had been

killed—at least Chief Hook, who still had his job, found it impossible to say—but it was ascertained that she had been wearing a black corduroy skirt, a reversible raincoat, and a blue scarf.

She was buried quietly in the local cemetery; Betsy, a senior huntsman the past summer but rooming alone, stood for a moment by the grave but was unable to recognize any aspect of the clothes or the body. Old Jane attended the funeral, as befitted the head of the camp, and she and Betsy stood alone in the cemetery by the grave. Although she did not cry over her lost girl, Old Jane touched her eyes occasionally with a plain white handkerchief, since she had come up from New York particularly for the services.

Coming Next Month

Remember *What Thin Partitions* and its companion stories by Mark Clifton, about the impact of poltergeists on personnel management? They are among the stories from other magazines that I most wish F&SF had published; and I'm especially happy to announce that the newest and last story in the series, *Remembrance and Reflection*, will be the long novelet in our January issue (on the stands in late November). Also featured will be *A Touch of Strange*, in which Theodore Sturgeon takes a fresh look at mermaids, and *Ministering Angels*, in which C. S. Lewis reveals his slant on the sex-on-Mars controversy that raged here a while back. For special seasonal interest, there'll be another tall tale of future football by Colin Sturgis, and stories of strange Christmases in other parts of time and space by Gordon R. Dickson and by the rapidly rising young English author Brian W. Aldiss.

Mr. Sheckley, whose stories are as pleasingly trim as his own neat Ivy League attire, writes a parable which is also a puzzle, and one that may, I hope, fascinate and baffle you as thoroughly as it did me.

Holdout

by ROBERT SHECKLEY

THE CREW OF A SPACESHIP MUST BE friends. They must live harmoniously in order to achieve the split-second interaction that becomes necessary from time to time. In space, one mistake is usually enough.

It is axiomatic that even the best ships have their accidents; the mediocre ones don't survive.

Knowing this, it can be understood how Captain Sven felt when, four hours before blastoff, he was told that radioman Forbes would not serve with the new replacement.

Forbes hadn't met the new replacement yet, and didn't want to. Hearing about him was enough. There was nothing personal in this, Forbes explained. His refusal was on purely racial grounds.

"Are you sure of this?" Captain Sven asked, when his chief engineer came to the bridge with the news.

"Absolutely certain, sir," said

engineer Hao. He was a small, flat-faced, yellow-skinned man from Canton. "We tried to handle it ourselves. But Forbes wouldn't budge."

Captain Sven sat down heavily in his padded chair. He was deeply shocked. He had considered racial hatred a thing of the remote past. He was as astonished at a real-life example of it as he would have been to encounter a dodo, a moa, or a mosquito.

"Racialism in this day and age!" Sven said. "Really, it's too preposterous. It's like telling me they're burning heretics in the village square, or threatening warfare with cobalt bombs."

"There wasn't a hint of it earlier," said Hao. "It came as a complete surprise."

"You're the oldest man on the ship," Sven said. "Have you tried reasoning him out of this attitude?"

"I've talked to him for hours,"

Hao said. "I pointed out that for centuries we Chinese hated the Japanese, and vice versa. If we could overcome our antipathy for the sake of the Great Cooperation, why couldn't he?"

"Did it do any good?"

"Not a bit. He said it just wasn't the same thing."

Sven bit off the end of a cigar with a vicious gesture, lighted it, and puffed for a moment. "Well, I'm damned if I'll have anything like this on *my* ship. I'll get another radioman!"

"That won't be too easy, sir," Hao said. "Not here."

Sven frowned thoughtfully. They were on Discaya II, a small outpost planet in the Southern Star Reaches. Here they had unloaded a cargo of machine parts, and taken on the Company-assigned replacement who was the innocent source of all the trouble. Discaya had plenty of trained men, but they were all specialists in hydraulics, mining, and allied fields. The planet's single radio operator was happy where he was, had a wife and children on Discaya, owned a house in a pleasant suburb, and would never consider leaving.

"Ridiculous, absolutely ridiculous," Sven said. "I can't spare Forbes, and I'll not leave the new man behind. It wouldn't be fair. Besides, the Company would probably fire me. And rightly, rightly. A captain should be able to handle

trouble aboard his own ship."

Hao nodded glumly.

"Where is this Forbes from?"

"A farm near an isolated village in the mountain country of the Southern United States. Georgia, sir. Perhaps you've heard of it?"

"I think so," said Sven, who had taken a course in Regional Characteristics at Uppsala, to better fit himself for the job of captain. "Georgia produces peanuts and hogs."

"And men," Hao added. "Strong, capable men. You'll find Georgians working on all frontiers, out of all proportion to their actual numbers. Their reputation is unexcelled."

"I know all this," Sven grumbled. "And Forbes is an excellent man. But this racialism—"

"Forbes can't be considered typical," Hao said. "He was raised in a small, isolated community, far from the mainstream of American life. Similar communities all over the world develop and cling to strange folkways. I remember a village in Honan where—"

"I still find it hard to believe," Sven said, interrupting what promised to be a long dissertation on Chinese country life. "And there's simply no excuse for it. Every community everywhere has a heritage of some sort of racial feeling. But it's every individual's responsibility to rid himself of that when he enters the mainstream of Terran life. Others have. Why not

Forbes? Why must he inflict his problems on us? Wasn't he taught anything about the Great Cooperation?"

Hao shrugged his shoulders. "Would you care to speak to him, captain?"

"Yes. Wait, I'll speak to Angka first."

The chief engineer left the bridge. Sven remained deep in thought until he heard a knock at the door.

"Come in."

Angka entered. He was cargo foreman, a tall, splendidly proportioned man with skin the color of a ripe plum. He was a full-blooded Negro from Ghana, and a first-class guitar player.

"I assume," Sven said, "you know all about the trouble."

"It's unfortunate, sir," Angka said.

"Unfortunate? It's downright catastrophic! You know the risk involved in taking the ship up in this condition. I'm supposed to blast off in less than three hours. We can't sail without a radioman, and we need the replacement, too."

Angka stood impassively, waiting.

Sven flicked an inch of white ash from his cigar. "Now look, Angka, you must know why I called you here."

"I can guess, sir," Angka said, grinning.

"You're Forbes's best friend. Can't you do something with him?"

"I've tried, Captain, Lord knows I've tried. But you know Georgians."

"I'm afraid I don't."

"Good men, sir, but stubborn as mules. Once they've made up their minds, that's all she wrote. I've been talking to Forbes for two days about this. I got him drunk last night—strictly in line of duty, sir," Angka added hastily.

"It's all right. Go on."

"And I talked to him like I'd talk to my own son. Reminded him how good the crew got along. All the fun we'd had in all the ports. How good the Cooperation felt. Now look, Jimmy, I said to him, you keep on like this, you kill all that. You don't want that, do you, I asked him. He bawled like a baby, sir."

"But he wouldn't change his mind?"

"Said he *couldn't*. Told me I might as well quit trying. There was one and only one race in this galaxy he wouldn't serve with, and there was no sense talking about it. Said his pappy would spin in his grave if he were to do so."

"Is there any chance he'll change his mind?" Sven asked.

"I'll go on trying, but I don't think there's a chance."

He left. Captain Sven sat, his jaw cradled in one big hand. He glanced again at the ship's chronometer. Less than three hours before blastoff!

He lifted the receiver of the intercom and asked for a direct line to the spacefield tower. When he was in contact with the officer in charge he said, "I'd like to request permission to stay a few days longer."

"Wish I could grant it, Captain Sven," the officer said. "But we need the pit. We can only handle one interstellar ship at a time here. An ore boat from Calayo is due in five hours. They'll probably be short of fuel."

"They always are," Sven said.

"Tell you what we can do. If it's a serious mechanical difficulty, we could find a couple cranes, lower your ship to horizontal and drag it off the field. Might be quite a while before we could set it up again, though."

"Thanks, but never mind. I'll blast on schedule." He signed off. He couldn't allow his ship to become laid up like that. The Company would have his hide, not a doubt about it.

But there *was* a course of action he could take. An unpleasant one, but necessary. He got to his feet, discarded the dead cigar stump, and marched out of the bridge.

He came to the ship's infirmary. The doctor, in his white coat, was seated with his feet on a desk, reading a three-month-old German medical journal.

"Welcome, Cap. Care for a shot of strictly medicinal brandy?"

"I could use it," Sven said.

The young doctor poured out two healthy doses from a bottle marked *Swamp Fever Culture*.

"Why the label?" Sven asked.

"Discourages the men from sampling. They have to steal the cook's lemon extract." The doctor's name was Yitzhak Vilkin. He was an Israeli, a graduate of the new medical school at Beer-sheba.

"You know about the Forbes problem?" Sven asked.

"Everybody does."

"I wanted to ask you, in your capacity as medical officer aboard this ship: Have you ever observed any previous indications of racial hatred in Forbes?"

"Not one," Vilkin answered promptly.

"Are you sure?"

"Israelis are good at sensing that sort of thing. I assure you, it caught me completely by surprise. I've had some lengthy interviews with Forbes since, of course."

"Any conclusions?"

"He's honest, capable, straightforward, and slightly simple. He possesses some antiquated attitudes in the form of ancient traditions. The Mountain-Georgians, you know, have a considerable body of such customs. They've been much studied by anthropologists from Samoa and Fiji. Haven't you read *Coming of Age in Georgia*? Or *Folkways of Mountain-Georgia*?"

"I don't have time for such

things," Sven said. "My time is pretty well occupied running this ship without me having to read up on the individual psychology of the entire crew."

"I suppose so, Cap," the doctor said. "Well, those books are in the ship's library, if you'd care to glance at them. I don't see how I can help you. Re-education takes time. I'm a medical officer anyhow, not a psychologist. The plain fact is this: There is one race that Forbes will not serve with, one race which causes him to enact all his ancient racial hostilities. Your new man, by some mischance, happens to be from that race."

"I'm leaving Forbes behind," Sven said abruptly. "The communications officer can learn how to handle the radio. Forbes can take the next ship back to Georgia."

"I wouldn't recommend that."

"Why not?"

"Forbes is very popular with the crew. They think he's damned unreasonable, but they wouldn't be happy sailing without him."

"More disharmony," Sven mused. "Dangerous, very dangerous. But damn it, I can't leave the new man behind. I won't. It isn't fair! Who runs this ship, me or Forbes?"

"A very interesting question," Vilkin observed, and ducked quickly as the irate captain hurled his glass at him.

Captain Sven went to the ship's library, where he glanced over *Coming of Age in Georgia* and *Folkways of Mountain-Georgia*. They didn't seem to help much. He thought for a moment, and glanced at his watch. Two hours to blastoff! He hurried to the Navigation Room.

Within the room was Ks'rat. A native of Venus, Ks'rat was perched on a stool inspecting the auxiliary navigating instruments. He was gripping a sextant in three hands, and was polishing the mirrors with his foot, his most dexterous member. When Sven walked in the Venusian turned orange-brown to show his respect for authority, then returned to his habitual green.

"How's everything?" Sven asked.

"Fine," said Ks'rat. "Except for the Forbes problem, of course." He was using a manual sound-box, since Venusians had no vocal chords. At first, these sound boxes had been harsh and metallic; but the Venusians had modified them until now, the typical Venusian "voice" was a soft, velvety murmur.

"Forbes is what I came to see you about," said Sven. "You're non-Terran. As a matter of fact, you're non-human. I thought perhaps you could throw a new light on the problem. Something I may have overlooked."

Ks'rat pondered, then turned

gray, his "uncertain" color. "I'm afraid I can't help much, Captain Sven. We never had any racial problems on Venus. Although you might consider the *sclarda* situation a parallel—"

"Not really," Sven said. "That was more a religious problem."

"Then I have no further ideas. Have you tried reasoning with the man?"

"Everyone else has."

"You might have better luck, Captain. As an authority symbol, you might tend to supplant the father symbol within him. With that advantage, try to make him aware of the true basis for his emotional reaction."

"There *is* no basis for racial hatred."

"Perhaps not, in terms of abstract logic. But in human terms, you might find an answer and a key. Try to discover what Forbes fears. Perhaps, if you can put him in better reality-contact with his own motives, he'll come around."

"I'll bear all that in mind," said Sven, with a sarcasm that was lost on the Venusian.

The intercom sounded the captain's signal. It was the first mate. "Captain! Tower wants to know whether you're blasting on schedule."

"I am," Sven said. "Secure the ship." He put down the phone.

Ks'rat turned a bright red. It was the Venusian equivalent of a raised eyebrow.

"I'm damned if I do and damned if I don't," Sven said. "Thanks for your advice. I'm going to talk to Forbes now."

"By the way," Ks'rat said, "of what race is the man?"

"What man?"

"The new man that Forbes won't serve with."

"How the hell should I know?" shouted Sven, his temper suddenly snapping. "Do you think I sit on the bridge inspecting a man's racial background?"

"It might make a difference."

"Why should it? Perhaps it's a Mongolian that Forbes won't serve with, or a Pakistani, or a New Yorker or a Martian. What do I care what race his diseased, impoverished little mind picks on?"

"Good luck, Captain Sven," Ks'rat said as Sven hurried out.

James Forbes saluted when he entered the bridge, though it was not customary aboard Sven's ship. The radioman stood at full attention. He was a tall, slender youth, tow-headed, light-skinned, freckled. Everything about him looked pliant, malleable, complaisant. Everything except his eyes, which were dark blue and very steady.

Sven didn't know how to begin. But Forbes spoke first.

"Sir," he said, "I want you to know I'm mighty well ashamed of myself. You've been a good Captain, sir, the very best, and this has been a happy ship. I feel

like a worthless no-account for doing this."

"Then you'll reconsider?" asked Sven, with a faint glimmer of hope.

"I wish I could, I really do. I'd give my right arm for you, Cap'n, or anything else I possess."

"I don't want your right arm. I merely want you to serve with the new man."

"That's the one thing I can't do," Forbes said sadly.

"Why in hell can't you?" Sven roared, forgetting his determination to use psychology.

"You just don't understand us Georgia mountain boys," Forbes said. "That's how my pappy, bless his memory, raised me. That poor little old man would spin in his grave if I went against his dying wish."

Sven stifled a curse and said, "You know the situation that leaves me in, Forbes. Do you have any suggestions?"

"Only one thing to do, sir. Angka and me'll leave the ship. You'll be better off short-handed than with an unCooperative crew, sir."

"Angka is leaving with you? Wait a minute! Who's *he* prejudiced against?"

"No one, sir. But him and me's been shipmates for close to five years now, ever since we met on the freighter *Stella*. Where one goes, the other goes."

A red light flickered on Sven's

control board, indicating the ship's readiness for blastoff. Sven ignored it.

"I can't have both of you leaving the ship," Sven said. "Forbes, why won't you serve with the new man?"

"Racial reasons, sir," Forbes said tightly.

"Now listen closely. You have been serving under me, a Swede. Has that disturbed you?"

"Not at all, sir."

"The medical officer is an Israeli. The navigator is a Venusian. The engineer is Chinese. There are Russians, New Yorkers, Melanians, Africans, and everything else in this crew. Men of all races, creeds and colors. You have served with them."

"Of course I have. From earliest childhood us Mountain-Georgians expect to serve with all different races. It's our heritage. My pappy taught me that. But I will not serve with Blake."

"Who's Blake?"

"The new man, sir."

"Where's he from?" Sven asked wearily.

"Mountain-Georgia."

For a moment, Sven thought he hadn't heard right. He stared at Forbes, who stared nervously back.

"From the mountain country of Georgia?"

"Yes sir. Not too far, I believe, from where I was born."

"This man Blake, is he white?"

"Of course, sir. White English-Scottish ancestry, same as me."

Sven had the sensation of discovering a new world, a world no civilized man had ever encountered. He was amazed to discover that weirder customs could be found on Earth than anywhere else in the galaxy.

He said to Forbes, "Tell me about the custom."

"I thought *everybody* knew about us Mountain-Georgians, sir. In the section I come from, we leave home at the age of sixteen and we don't come back. Our customs teach us to work with any race, live with any race . . . except our own."

"Oh," said Sven.

"This new man Blake is a white Mountain-Georgian. He should have looked over the roster and not signed for this ship. It's all his fault, really, and if he chooses to overlook the custom, I can't help that."

"But *why* won't you serve with your own kind?" Sven asked.

"No one knows, sir. It's been handed down from father to son for hundreds of years, ever since the Hydrogen War."

Sven stared at him closely, ideas beginning to form. "Forbes, have you ever had any . . . feeling about Negroes?"

"Yes sir."

"Describe it."

"Well sir, we Mountain Georgians hold that the Negro is the

white man's natural friend. I mean to say, whites can get along fine with Chinese and Martians and such, but there's something special about black and white—"

"Go on," Sven urged.

"Hard to explain it good, sir. It's just that—well, the qualities of the two seem to mesh, like good gears. There's a special understanding between black and white."

"Did you know," Sven said gently, "that once, long ago, your ancestors felt that the Negro was a lesser human being? That they created laws to keep him from interacting with whites? And that they kept on doing this long after the rest of the world had conquered its prejudices? That they kept on doing it, in fact, right up to the Hydrogen War?"

"That's a lie, sir!" Forbes shouted. "I'm sorry, I don't mean to call you a liar, sir, but it just isn't true. Us Georgians have always—"

"I can prove it to you in history books and anthropological studies. I have several in the ship's library, if you'd care to look."

"Yankee books!"

"I'll show you Southern books, too. It's true, Forbes, and it's nothing to be ashamed of. Education is a long, slow process. You have a great deal to be proud of in your ancestry."

"If this is true," Forbes said, very hesitantly, "then what happened?"

"It's in the anthropology book. You know, don't you, that Georgia was hit during the war by a hydrogen bomb meant for Norfolk?"

"Yes sir."

"Perhaps you didn't know that the bomb fell in the middle of the so-called Black Belt. Many whites were killed. But almost the entire Negro population of that section of Georgia was wiped out."

"I didn't know that."

"Now, you must take my word that there had been race riots before the Hydrogen War, and lynchings, and a lot of bad feeling between white and black. Suddenly the Negroes were gone—dead. This created a considerable feeling of guilt among the whites, particularly in isolated communities. Some of the more superstitious whites believed that they had been spiritually responsible for this wholesale obliteration. And it hit them hard, for they were religious men."

"What would that matter, if they hated the Negroes?"

"They didn't, that's the whole point! They feared inter-marriage, economic competition, a change of hierarchy. But they didn't *hate* the Negroes. Quite the contrary. They always maintained, with considerable truth, that they liked the Negroes better than the 'liberal' Northerners did. It set up quite a conflict."

Forbes nodded, thinking hard.

"In an isolated community like

yours, it gave rise to the custom of working away from home, with any race except their own. Guilt was at the bottom of it all."

Perspiration rolled down Forbes' freckled cheeks. "I can't believe it," he said.

"Forbes, have I ever lied to you?"

"No sir."

"Will you believe me, then, when I swear to you that this is true?"

"I—I'll try, Captain Sven."

"Now you know the reason for the custom. Will you work with Blake?"

"I don't know if I can."

"Will you try?"

Forbes bit his lip and squirmed uncomfortably. "Captain, I'll try. I don't know if I can, but I'll try. And I'm doing it for you and the men, not on account of what you said."

"Just try," Sven said. "That's all I ask of you."

Forbes nodded and hurriedly left the bridge. Sven immediately signaled the tower that he was preparing for blastoff.

Down in the crew's quarters, Forbes was introduced to the new man, Blake. The replacement was tall, black-haired, and obviously ill at ease.

"Howdy," said Blake.

"Howdy," said Forbes. Each made a tentative gesture toward a handshake, but didn't follow it through.

"I'm from near Pompey," said Forbes.

"I'm from Almira."

"Practically next door," Forbes said unhappily.

"Yeah, afraid so," Blake said.

They eyed each other in silence. After a long moment, Forbes groaned, "I can't do it, I just can't." He began to walk away.

Suddenly he stopped, turned and blurted out, "You all white?"

"Can't say as how I am," Blake replied. "I'm one-eighth Cherokee on my mother's side."

"Cherokee, huh?"

"That's right."

"Well, man, why didn't you say so in the first place. Knew a Cherokee from Altahatchie once, name

of Tom Little Sitting Bear. Don't suppose you're kin to him?"

"Don't believe so," Blake said. "Never knew no Cherokees, myself."

"Well, it don't make no never-mind. They should a told me in the first place you was a Cherokee. Come on, I'll show you your bunk."

When the incident was reported to Captain Sven, several hours after blastoff, he was completely perplexed. How, he asked himself, could one-eighth Cherokee blood make a man a Cherokee? Wasn't the other seven-eighths more indicative?

He decided he didn't understand American Southerners at all.



The Science Screen

by CHARLES BEAUMONT

AS IT HAS ALWAYS SEEMED ODD TO me that Italian film-makers have never produced an auto racing movie (auto racing being far and away the most popular Italian sport), it has seemed odder still that we have had so few s.f. and horror movies from England. They love their Wells and Haggard over there, and, I am told, positively dote on American products. Yet, discounting certain outstanding examples to the contrary, they have seldom attempted to transfer their enthusiasm onto celluloid. Despite such successes as *THE MAN WHO COULD WORK MIRACLES*, *THINGS TO COME*, *DEAD OF NIGHT* and *BREAKING THE SOUND BARRIER*, and despite that uniquely British talent for lending an indescribable *class* to the hoariest sort of turkey, they have never fallen into what would seem a logical s.f. boom.

It is likely that they will now, however, with the emergence of Hammer Films, Inc. This group, headed by Michael Carreras, appears dedicated to the proposition that it is as easy to make good science fiction and horror films as bad ones and that since the bad ones almost invariably succeed, it follows that the good ones will

succeed more. This unheard-of reasoning is paying off, too. A trio of Hammer films, all made on ridiculously low budgets, are mopping up on the American market, with the end still not in sight.

The first of these was missed by this reviewer on its original U.S. release, primarily because of the ghastly title: *THE CREEPING UNKNOWN*. The blurbs and posters gave the impression that it was the kind of cinematic experience to be voluntarily inflicted upon oneself only if one happened to have Katzman's Disease. So I avoided it, as you would avoid a bubonic plague carrier. Then, much later, when it had disappeared from the theatres, I was advised of my boo-boo. I had, friends said, missed one of the best Creepies to come along in several ages. I doubted it, frankly, but when *THE CREEPING UNKNOWN* was re-issued, I popped in for a look-see—barbs neatly dipped in my own special blend of vitriol and bitter wormwood. Five minutes into the film and I saw, clearly, that my friends had been only too correct. What I'd considered *infra dig* turned out to be a blooming masterpiece!

For the benefit of those who,

like myself, may have been put off by the advertising, I must report that the film was based on an original play, *THE QUATERMASS EXPERIMENT*, by that eminent short story writer, Nigel Kneale. Quatermass (played superbly by Brian Donlevy) is a rock-hard, icy-veined Scientist who has launched the first spaceship. As the movie begins, the ship is crashing back to Earth. Authorities investigate it and are presented with a dilemma worthy of John Dickson Carr. Whereas there had been three crew members inside the craft at takeoff, only one—Victor Carroun—can be found . . . *and the air-lock was not opened!* (Do I see a brand new school of s.f.—*The Locked Spaceship Puzzle*—in the making?) The police become interested and we divide our time between investigating the problem of the two missing men and wondering what has happened to the remaining one. He is in a state of shock. But, Quatermass sees, there's more than that the matter with him. In fact, according to the medical tests, this chap ought to be dead! He is hospitalized for further study, which piques his wife. She arranges for a shady character to spirit Victor away from the dreadful place. Unfortunately, Victor is not entirely Victor; he is a Thing possessed—by what, we don't know. And the Thing, after frightening Mrs. Carroun into

apoplexy and killing her confederate, goes on a rampage. Quatermass examines the murdered man and finds only an empty skin. He finds a shattered vase and some cactus needles in the hospital room. He begins to ponder the possibilities of alien life forms in space . . . and the fun really begins. But since it is all enormously suspenseful, I won't ruin it by further exposition.

The photography, the direction (particularly in the zoo sequence) and the acting (excepting the wife) are magnificently done, quite worthy of Lewton's best. And if the ending is a bit hurried and pat, one can easily reflect that perfection is always dull.

The second Hammer film, *x—THE UNKNOWN*, is equally good, but the effect is weakened by its overall similarity to the first. Dean Jagger plays the Scientist this time, and he is very convincing. The "monster" does bear an unhappy resemblance to a tub of Tide—whereas the Creeping Unknown was an original creation of pure Mathesonian green-dripping Evil—but this is a relatively small flaw.

Both pictures benefit from first-rate editing. They are brilliantly paced, well orchestrated and, I'm glad to say, in good old-fashioned black-and-white.

Hammer Film #3, *THE CURSE OF FRANKENSTEIN*, is the most successful from a financial standpoint, but the least satisfying of the lot.

Jimmy Sangster's script is excellent, if a bit heavy on the Great-Heavens-what-monstrous-things-are-we-doing side, and it certainly is closer to Mary Shelley's book than any other previous version; however, it lacks what I can only call the Divine Feeling for Corn. And this is its downfall. The boys try awfully hard to be scientifically logical, but *FRANKENSTEIN* is not a scientifically logical story. The incessant dwelling on details, therefore, is a fatal blow to the illusion. An old pair of eyes from a charnel house won't work, we keep thinking; a brain several days old couldn't be made to function; and so forth. And when we see the monster, who looks as if he'd just fallen face-forward into a tureen of plaster of Paris, we say: Oh, come, the rest of the fellow is normal; no need for him to be so infernally ugly about the chops.

THE CURSE OF FRANKENSTEIN is to the ancient Universal *FRANKENSTEIN* what a boy scout picnic is to a ghouls' feast. In the venerable but superlative original, no particular attempt was made to convince us that the Baron could create life. We were simply told that he was a remarkable person, a genius, and, as everybody knows, a genius is not to be questioned. For the doubters, director James Whale came up with a psychological master stroke: Baron von F. could prepare the Creature for life, but only the unleashed

elemental forces of nature could make it truly live. Thus, when the Monster was hoisted up to the top of the old watchtower, up into the heart of a raging storm, when he met the naked lightning and took it and all of its mysterious power into his body—we were prepared to accept anything. Alas, in the new British picture, we are asked to believe that a few mumbled equations, a couple of spinning pinwheels, and a vat of water can put life into a dead thing.

What it comes to, I guess, is a matter of approach. James Whale was intent upon frightening the liver and lights out of you, and geared his film accordingly; Michael Carreras wanted, instead, to tell a fascinating story. Both men succeeded in their aims. But long after I have forgotten everything about *THE CURSE OF FRANKENSTEIN*, I will still remember vividly the idiot hunchback, Dwight Fry, hopping down those time-worn black stairs; I will remember the watchtower, bowed with desuetude and gray with years; I will remember the thundering sky and the quiet churchyard and the look on the little girl's face when she has run out of flowers . . . Mostly, I will remember the man who kept me and millions like me forever scared of dark corners and empty closets, the greatest monster of them all—the mighty, the incomparable Karloff. Damn it, he *is* Frankenstein's Creature!

Here is a sensitive story of adolescence—and an astonishing technical tour de force, which gives us a penetrating glimpse into a wholly alien culture in well under 2000 words, without one sentence of explanatory exposition.

The Cabbage Patch

by THEODORE R. COGSWELL

AUNT HESTER SENT ME TO BED EARLY that night. I lay quietly in the old four-poster, listening to the night sounds and the soft sleepy hisses as the narns who lived in the old fern tree underneath my window bedded themselves down in their holes. I was supposed to settle down too, but the tight excited feeling inside my chest wouldn't go away. I pulled the soft down pillow over my head and tried to make everything black. I wanted to go to sleep right away so I could wake up in time to see the birth-fairy when she came down with my new sister.

Priscilla Winters said babies came from the cabbage patch but I knew better. She brought a cabbage to school one day to prove it, and that night when we were supposed to be asleep she opened it up and showed me a baby inside.

It was squishy and white like all soon-babies are before they make the change, but I knew it wasn't a real baby because it didn't have any teeth. We made a birthing-box out of a jar and gave it some flies to eat but it wouldn't eat them, it just kept crawling around and waving its feelers as if it didn't like it there. When we woke up the next morning it had turned brown and was all dead.

The narns in the fern tree had stopped their whispering, but I still couldn't get to sleep. The little moon had chased the big one up over the horizon so far that its light was shining through the window right into my eyes. I got up and shut the blinds but even having the room dark again didn't help. I kept seeing pictures of the birth-fairy fluttering down like a beautiful butterfly, and then, after she'd put the babies safe in

their birthing-box, flying off again with the year-father soaring after her on his fine new wings.

I wanted to see his wings but Mother wouldn't let me. For two months now she had kept him shut up in his room and she wouldn't even let me speak to him through the door. I wanted to say goodby to him because, even if he was only a year-father, he'd been nice to me. I was never supposed to be with him unless Mother or Aunt Hester were around, but sometimes I'd slip into the kitchen when they were away and we'd talk about things. I liked being with him best when he was baking preska because he'd give me bits of the dough and let me make funny things out of them.

Once Aunt Hester caught me alone with him and her face got all hard and twisted and she was going to call the patrol and have him beaten, but Mother came in just then. She sent the year-father to his room and then took me into the parlor. I knew that she was getting ready for one of her heart-to-heart talks but there wasn't anything I could do about it, so I just sat there and listened. Mother's talks always got so wound in on themselves that when she was through I usually couldn't figure out what all the fuss had been about.

First she asked me if I'd felt anything funny when I was alone with the year-father. I asked her

what she meant by "funny" and she sort of stuttered and her face got all red. Finally she asked me a funny question about my stinger and I said "no." Then she started to tell me a story about the wasps and the meem but she didn't get very far with that either. She wanted to but she got all flustered and her tongue wouldn't work. Aunt Hester said nonsense, that I was still a little girl and next year would be soon enough. Mother said she wished she could be sure, then she made me promise that if ever my stinger **felt** funny when I was around a year-father, I'd run and tell her about it right away because if I didn't, something terrible might happen.

My pillow got all hot so I went and sat in my chair. The more I thought about the year-father, the more I wanted to go and see his new wings. Finally I went over to the door and listened. I could hear Mother and Aunt Hester talking in the front of the house so I tiptoed down the back stairs. When I got to the landing I stopped and felt around with my foot until I found the part of the next stair that was right against the railing. That's a bad stair because if you step in the middle of it without thinking, it gives a loud squeek that you can hear all over the house.

The year-father's room is right next to the kitchen. I gave a little scratch on the door so he would

know who it was and not be frightened. I stood there in the dark waiting for him to open up but he didn't so I went inside and felt for him in his nest. He wasn't there.

First I thought maybe I should go back up and get in bed because Aunt Hester said that if she ever again caught me up at night when I was supposed to be sleeping, she'd give me a licking that I'd never forget. But then I started to think of what would happen to the year-father if he'd gone outside and the patrol caught him wandering around alone at night, and I decided that I'd better tell Mother right away, even if I did get a wallop afterwards.

Then I thought that first I'd better look in the kitchen for him. It was dark in there too so I shut the hall door and lit the lamp on the kitchen table. The stone floor was awfully cold on my feet and I began to wish that I'd remembered to put on my slippers before I came downstairs. Once my eyes got used to the light I looked all around but the year-father wasn't there either. I was about to blow out the lamp and go and tell mother when I heard a funny sound coming from the nursery.

I know it sounds funny to have a nursery in the kitchen, but since soon-babies have to be locked away in a dark place until it's time for them to make the change, Mother said we might as well use the old

pantry instead of going to all the trouble of blacking out one of the rooms upstairs.

The big thick door that mother had put on was shut but she'd forgotten to take the key away so I went over and opened it a crack. I was real scared because at birthing time nobody is allowed to go in the nursery, not even Aunt Hester. Once the little ones are in the birthing-box, Mother locks the door and doesn't ever open it up again until after they've changed into real people like us.

At Priscilla's house they've got an honest-to-goodness nursery. There's a little window on the door that they uncover after the first month. It's awful dark inside but if you look real hard you can see the soon-babies crawling around inside. Priscilla let me look in once when her mother was downtown. They had big ugly mouths and teeth.

The sound came again so I opened the door. It was so dark inside that I couldn't see a thing so I went back and got the lamp. The noise seemed to be coming from the birthing-box so I went over and looked in. The year-father was hunched up in the bottom of it. He didn't have any wings.

He blinked up at me in the lantern light. He'd been crying and his face was all swollen. He motioned to me to go away but I couldn't. I'd never seen a father

without his clothes on before and I kept staring and staring.

I knew that I should run and get Mother but somehow I couldn't move. Something terrible was happening to the year-father. His stomach was all swollen up and angry red, and every once in a while it would knot up and twist as if there were something inside that didn't like it there. When that would happen he'd roll his head back and bite down on his lower lip real hard. He seemed to want to yell but he'd choke it back until nothing came out but a little whimper.

There was a nasty half-healed place on his stomach that looked as if he'd fallen on a sharp stick and hurt himself real bad. He kept pushing his hands against it as if he was trying to hold back something that was inside trying to get out.

I heard Mother's voice calling from the kitchen and then Aunt Hester's voice saying something real sharp but I couldn't look up or answer. Blood was trickling out through the year-father's locked fingers. Suddenly he emptied out in a raw scream and fell back so limp that it looked as if all his bones were gone. His hands dropped away and from inside his stomach something tore at the half-healed place until it split and opened like a big mouth. Then I could see the something. I knew it for what it was and I felt sick

and scared in a different sort of way. It inched its way out and wiggled around kind of lost like until it finally lost its balance and fell to the bottom of the box. It didn't move for a minute and I thought maybe it was dead but then the feelers around its mouth began to reach out as if they were trying to find something. And then all of a sudden it started a fast wobbly crawl as if it knew just where it was going. I saw teeth as it found the year-father and nuzzled up to him. It was hungry.

Aunt Hester slammed and locked the pantry door. Then she made me a glass of hot milk and sent me up to bed. Mother came into my room a little later and stood by my bed, looking down at me to see if I was asleep. I pretended I was because I didn't want to talk to her and she finally left. I wanted to cry but I couldn't because if I did she'd hear me and come back up again. I pulled the pillow down over my face real tight until I could hardly breathe and there were little red flashes of light in the back of my eyes and a humming hive sound in my head. I knew what my stinger was for and I didn't want to think about it.

When I did get to sleep I didn't dream about the year-father, I dreamed about the wasps and the meem.

We are now, we tell ourselves, living in peace—which means that throughout the world not very many people are being killed in not very many wars, and that in this country the Armed Forces stand at less than 700% of their strength before Pearl Harbor and not much more than two-thirds of the national budget is connected with "defense." But have you ever stopped to think, as Mr. Anderson has, of the results if insidious and subversive forces were really to precipitate an active state of peace?

The Peacemongers

by POUL ANDERSON

AT NIGHT, FROM ABOVE, THE ENORMOUS dinginess of Chicago became a carelessly sprawled dragon's hoard, a million winking jewels and clotted gold fountains. Among them flashed the new Civic Auditorium, turned into one great neon billboard. Royce squinted through the copter window, trying to make it out.

There was the usual heroic soldier with the usual look of muscular determination, his bayonet staving off a giant slug-like monster with fangs while a leggy, busty blonde holding a golden-haired tot cheered him on. The slug's face was recognizably—just short of libel—patterned on Sam Royce. The caption read:

REMEMBER SAMOA!
HELP SAVE YOUR COUNTRY

AND LOVED ONES LIBERAL RALLY TONITE

"Hell of a time for us to meet," grumbled Buechley. "Chicago'll be crawling with Liberals, won't it? If they learn about this confab—"

"Oh, dear," said little Wald. His unworldly eyes fluttered around thick contact lenses. "Should we?"

Royce grinned without much humor. "The Tower was built defensible," he replied. "But I don't think even Larson could have found out we're meeting."

"What happened at Samoa, anyway?" asked Buechley. He had only been back on Earth for a couple of days, and Royce had had him under wraps the whole time. "Looks like a new national slogan."

"It is," said Royce. "That's where the entire Japanese fleet surren-

dered to us last year, with no warning whatsoever."

Buechley whistled. He was not a scrupulous man, but treachery on such a majestic scale could appall anyone. "I suppose it produced a crisis?" he said inanely.

"Lord, yes," answered Royce. "If CINCOPAC hadn't been able to lure the Russian navy out and engage 'em . . . We lost half our fleet there, brilliant operation, Admiral Harkness got a medal out of it. But for a while the stock market nosedived, which gave the Liberal Party a big shot in the arm. If we can't do something about it, the Liberals are going to sweep this election. Won't be a dozen Reactionary seats left in Congress."

His face was bleak as he maneuvered the copter toward the Wilson Tower, and he said no more until it was down on the roof. Dim light shone off the guns of his private guard, where they waited above the city. He led the way to an elevator.

Wald licked his lips. "I wonder," he mumbled. "I really do wonder, Mr. Royce . . . Why, if this scheme of yours is ever exposed—"

"Shut up! I'm paying you to take risks."

"And to sell my scientific soul," whispered Wald.

Buechley gave him a hard look. The astronomer shrank away from the big spaceman.

Royce ignored them. He glanced

at his watch. The rally would already have begun. Larson, the Liberal candidate for President, would start his address any minute. The man was an efficient demagogue. By the time he had finished, the Reactionary name in Chicago would be rich dark mud. And all over the nation, folk would be nodding agreement at their television screens.

"Old isolationists never die," murmured Royce. "They just rave away."

The elevator let the three of them out into a noiselessly plush corridor paneled with golden oak. Royce walked quickly toward the room at the end. The guards there presented arms. "Everybody's arrived, sir."

"Good," said Royce. "Now keep everybody else out of here. And any of you who so much as hint at this get-together, any time in the future, will be boiled with white wine for my dinner."

He adjusted his diamond stickpin, opened the soundproof door, and walked in to meet the men who ruled the Earth.

Or their representatives, at least. And the rule was a precarious one. Royce's Reactionary Party could well be turned out at the coming election; Castro might wake up any morning to find counter-revolution snarling through the streets of Buenos Aires; the College of Commissars might choose a Vozhd leaning toward Orthodox Marxism

when feeble old Grigorovitch died. . . . They were grim men, though well-dressed, the dozen who rose for him.

He closed the door and locked it. There were comfortable chairs around a long mahogany table, drinks and snacks on the sideboard, a full-wall transparency flickering with the faerie spectacle of Chicago after dark. But you didn't notice the furnishings; the room was too full of tension.

Royce bowed slightly. "Good evening," he said. "I'm sorry to be late. Had to pick these gentlemen up at the hideaway, and make damn sure none of us were seen. May I present Captain Buechley of the Corporation space service; Dr. Wald, distinguished astrophysicist from Clement Observatory."

Lord Vallandringham, Ambassador of Great Britain, adjusted his monocle. "D'je'do," he clipped. "I take it they are part of this mysterious plan of yours?"

Royce nodded and went to the head of the table. Wald sat shyly down at the end. Buechley helped himself at the sideboard and leaned against the wall, face impassive.

"You realize I wouldn't have called this meeting, with all the trouble of secrecy involved, if there weren't a hell of a good reason," began Royce. "The fact is—and we'd better face it—if our, uh, conspiracy doesn't succeed soon, it will never succeed at all. We need a new approach, and fast."

"Nonsense," said the Russian, Dmitrov, brusquely. He was clad in the full canonicals of an archimandrite in the Reformed Communist Party. "Historical necessity is with us. We can't lose."

Royce took out a cigar and bit the end off. "Well," he replied mildly, "perhaps the Forty-One Articles do say world peace is inevitable, but they don't say when it will come, do they? I'd kind of like it to be in my lifetime."

Vallandringham cleared his throat. There was a torment behind the schooled manner; he spoke for his country and his country faced ruin. "Britain is already trying," he said harshly. "If you Americans would only help! You have the greatest consumptive capacity in the world. We don't ask you to enter the peace with us. All we say is, 'We have the tools, you finish the job.'"

"I sympathize," answered Castro. "I would assist if I could. But it is impossible. Brazil may surrender to us any day, and then where are *we*?"

Oliveira, from Rio, flushed darkly. "Don't blame us," he snapped. "Do you think we *wanted* our whole Third Army forced into a pocket and surrounded? Your General Mendoza had every opportunity to by-pass us—"

"Please!" Royce smiled, rather bleakly. "International conspirators have no business getting patriotic." He jerked a thumb at the window.

"Down there the Liberals are holding a mass meeting, nationally televised. Down there is the enemy. Perhaps you'd like to see him?"

He leaned over and turned on the TV. As he struck his cigar alight, Larson's face leaped out of the screen, flamboyant and angry. The voice roared at them:

"—let me only recapitulate. Let me remind you of what you suffered in the last World Peace. A five-year peace, do you remember? Five years of unemployment, of bread lines, of unions decaying and the great corporations growing fat! Five years of profits for the few and misery for the many!

"They called that Second World Peace a 'breathing spell.' They called it a 'tooling-up period.' They called it 'the peace to end peace.' *And they lied!* Even now, my friends, even now the Reactionaries are engineering another peace. Even now, as armistice after armistice slinks into being, as peace treaty after peace treaty is signed . . . even now, the specter of a world without war is rising before us!

"Why, you ask, do the Reactionaries want peace? Why would any sane man want peace?

"The answer, ladies and gentlemen of America, working men of America, mothers of America, soldiers, sailors, airmen, spacemen of America—the answer is simple. Big Business wants peace for profit! Yes, for profit!

"True, when production outruns

consumption, as it always does in peacetime, there is mass unemployment. True, our gallant servicemen are out of work. True, their fathers and brothers walk the streets past empty munitions plants. But there are always some who have work. Especially the technicians in the automated factories, on the automated farms and sea ranches . . . *they* are always well paid, a ready market. And in peacetime there are low taxes, no price and rent controls, no restriction of profits, no scarcity of materials, no rationing, no priorities and regulations to contend with. Yes, the capitalist wants peace because peace pays. It pays for him!

"For him only! Not for the serviceman, the working man, the wives, mothers, sisters, sweethearts, the little children, the Postgraduate Citizens entering on an honorable retirement. They can be left to exist on a miserable unemployment compensation, or to fight for survival as prices soar. They can be left with idle hands. What does the Big Businessman, counting his swollen peacetime profits, care about them? What do the Interests care about *you*?

"I say to you, and I say it in all solemn truth: elect the Reactionaries and you get a peace. But elect the Liberals, our party—no, *your* party—elect the Liberals and you get a war. We have pledged ourselves before Almighty God to strive for everlasting world conflict.

If elected, I promise to go to Korea and stir up that war again; but this will only be the beginning.

"Are you going to stand in the breadlines because of these money-drunk Merchants of Life? Are you, once again, going to let British propaganda drag you into the European mess? Are you going to be gulled by the Peacemongers?"

The "NO!" that answered him was like thunder.

Royce turned the set off. There was a moment of silence.

"Well?" he said.

"Well, we have heard it before," said von Thoma of I. G. Farben. "What of it?"

"Discounting the emotional ranting," said Royce, "it happens to be true. Now, doesn't it?"

"For the capitalists, perhaps," said Dmitrov. "Not for the Faithful. The so-called Orthodox Party wants war, of course, but not we of the Ref—"

"Yes, yes," interrupted Royce. "It's the same thing, though. Soviet and free world society have both become adjusted to war. So thoroughly adjusted that peace is a short-lived, abnormal, and disastrous thing. In the capitalist nations, like this one, peace means depression. In the Communist countries, peace means unrest. You can't maintain good Communistic self-abnegation when automated peacetime factories are glutting everybody with more stuff than they can use."

"That is how it works for the Orthodox," said Dmitrov. "It offers empirical proof that their scienceless creed is mere idolatry. The Reformed Party, harking back to the Party Fathers, holds that the time for the state to begin withering away is *now*; and privately—we cannot admit it openly as yet—we agree that the state can only wither if war is abolished."

"All right," said Royce hastily. "Skip the sermons, please, Your Proleness. The fact is that these incessant, limited, non-atomic, deliberately inefficient little wars are all that keep the average man from smothering in his own productivity. As a result, the average man wants war, and you get symbols like the Kentucky Martyrs, and—"

"Kentucky Martyrs?" asked Krishnamura of India.

"Oh, they were a score of decorated soldiers who had to turn coal miner during the last peace. Down all day in a coal mine at twice the hazard, half the pay, and none of the rear-area compensations. The mine collapsed on them. The Liberals have played it up big ever since."

Vallandringham looked desperate. "Please," he said. "We are wasting time. At any moment, d'you realize, the Tory government may fall. And the Whigs are pledged to declare war on somebody."

"I know," said Royce. "I was just trying to get it across, the magnitude of the problem we face."

And the rewards, if we can solve it." He leaned forward, eagerly. "Let me tell you something. My outfit has found a uranium lode on Venus that makes the Belgian Congo look sick. There are billions of dollars in it if we could only plant a colony to mine the stuff. But can we do it with this stupid war going on?" He clenched hairy fists. "What do you think? We're lucky to maintain a dozen space-ships of our own. Everything else has to be sold to the Lunar Fleet—at a stinking three percent profit!"

"Very well, very well," said Castro. "We all agree. This has been the problem since we were in diapers, no? And now do you think you have a solution?"

"I'd damn well better have," said Royce. "Business influence is waning every day, what with war-time taxes and Liberal sentiment. You all face corresponding situations at home. If we don't act soon, it'll be too late."

"But do you, then, have an answer?" inquired Dmitrov. "An answer which will work for all countries under all forms of government?"

"I believe so," said Royce. His lips tightened. "It's going to seem pretty wild, but what have we to lose?"

They waited, with a gathering tautness. The city smoldered beyond the tower.

"Dr. Wald, if you please," said Royce.

The little man stood up. He gulped and shuffled his feet. "My . . . my theory of . . . variable stars—" he began.

"Variable stars!" roared von Thoma. "*Gott in Himmel*, what have we to do with astronomers?"

"Dr. Wald is a Nobel Prize winner," said Royce dryly. "He was a pretty expensive astronomer."

The scientist's thin cheeks flushed. "Sir, if you are insinuating I accepted your . . . your bribe because—"

"Sorry," said Royce. "Please continue."

"I . . . well . . . at Mr. Royce's . . . uh . . . insistence, I . . . The theory of irregular variables is not at all well understood, you realize, and my . . . my word carries weight. Ah . . . In three years of work, I have been able to, to produce a, ah, theory . . . account for fluctuations in luminosity and . . . and . . . fluctuations . . ." Wald looked miserable. So did his audience.

"Oh, never mind," sighed Royce. "Sit down. I'll put it in nickel words. The fact is that some stars expand every once in a while. There's no predictability to it, they aren't like ordinary variables. Nobody really knows why."

"A nova," said Vallandringham wisely.

"I wasn't exactly thinking of a nova. Nothing on that scale. Just a small temporary upsurge of radiation." Royce drew hard on his

cigar and flickered his glance around the eyes that locked on him.

"Gentlemen," he went on, "if it were authoritatively announced that in ten years the sun would increase its output enough to boil all the life off this planet—what would you do?"

Breath hissed out of lungs, explosively. "You don't mean it's going to?" whispered Krishnamura.

"Oh, no. Dr. Wald's new theory only says it might. It's a, shall we say, very plausible theory. Carefully tailored. Impeccable mathematics, and fits all the known facts. Nobody can disprove it. Neither can anyone prove it—unless the sun should start acting the way his theory says it would act about ten years before blowing up."

"But will the sun be so obliging?" murmured Oliveira.

Buechley stepped forth. His face was sardonic. "That was my department," he said. "I just got back from the neighborhood of the sun. Went within twenty million miles of it. Hot. We planted a bunch of missiles in orbit with super-H bombs for warheads. Each bomb big enough to rub a continent off the map. At a radio signal, those bombs are going to dive close to the sun, as close as the metal will stand, and explode."

"But my God!" cried Vallandringham. "You might *make* a novel!"

"Oh, heavens, no," said Wald. He was more confident of himself

now when he could correct someone. "The masses and forces involved are, ah, mere firecrackers by comparison. You have no idea how big the sun really is. Why, all those bombs together, exploding simultaneously in the photosphere, could hardly raise one decent solar prominence. But exploding just *outside*, and releasing large clouds of energetic fluorescent gas—do you see? We can, er, fake some very spectacular prominences indeed. Exactly the type of prominence my theory predicts for a star due to expand in ten years."

"We can do it again, from time to time," added Buechley. "No strain."

Royce grinned at the room. "If all the astronomers agreed that the world would end soon," he asked somewhat rhetorically, "would you want to be bothered with fighting a war?"

"*Gott, nein!*" said von Thoma hoarsely.

"The panic," objected Vallandringham. "The orgies . . ."

"Exactly," laughed Royce. "For the first time in a century, there's going to be a civilian consumption equal to the output of the factories. People will want to make the best of everything. They'll have to work some, to earn the money to buy the luxuries, but I daresay a four-hour work week will be quite acceptable. Full employment, then—in peacetime!"

"Of course, there'll be some at-

tempts to get a few people off Earth. The expanded sun would support life on the big Jovian moons. But first colonies would have to be planted, Earth-like atmospheres . . . and *we* have all the astronautical know-how! They'll buy all the space equipment we can sell, at our prices!"

"A ten-year orgy," mused Castro. "Ten years of wild world peace . . ."

"And what, pray, happens when the sun fails to blow up?" demanded Vallandringham.

"Figure it out," said Royce. "During the orgy, nobody will want to trouble his head over the drab business of politics. They'll all be glad enough to turn the reins over to anyone who offers to take them. In a decade, Big Business,

Reformed Marxism, the *Federales*, the Brahmins—all the interests we here represent—will be so firmly in the saddle no force could dislodge them. And during that time, the world will be so sodden we can maybe adjust all our societies to a form that can survive even a state of non-emergency."

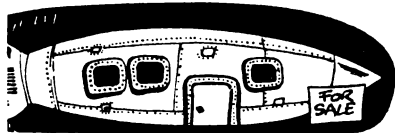
Von Thoma nodded in awe. "I like the scheme," he said. "I think maybe even it works." Then, slowly: "But I have an orderly mind. What about those establishments on Jupiter's moons? Nobody will want them. What do we do with them after this is over?"

"Oh, that," squeaked Wald. "I get that for my new observatory. Ten years from now, I had better be far, far away from Earth!"

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With Butter and Mustard

by GORDON R. DICKSON

"AND HERE WE ARE!" CRIED PETER Tomfoyl, excitedly gazing at the invisible bubble wall that surrounded the Audigel Space Platform. "We made it. Look, Max, look. The ocher sands of Mars. What makes them ocher, Max?" He swallowed and controlled his voice. "Iron rust, I suppose."

"Red lead," snapped Max Audigel, his thicket brows and black beard hidden in a pile of cameras and camping equipment. "It's poisonous. Don't eat any. Get your fat carcass over here and we'll load up for the trip."

"Really?" gulped Peter, coming across the platform. "Red lead? Think of that! I certainly won't taste a single—aw, Max, you're kidding me again. I can tell!"

"Take this, and this, and this. And this. Hang this around your neck. Careful, you idiot! Don't touch the controls in that box at your waist."

"I wish you wouldn't keep calling me an idiot, Max," said Peter. "Maybe it was only a beer joint but I was a bartender. I belonged to the union."

"Of the jerks, by the jerks and for the jerks," said Max. "Stand still. And remember what I said about that box—it controls your individual atmospheric bubble. I don't give a hang about you, but I don't want that equipment dumped along the way—particularly the cameras."

"Aw, Max. A couple of scientists shouldn't ought to talk that way to each other."

Max stopped. His black beard jutted out like a club. He stood with hands on hips, regarding Peter.

"A couple of what?"

"Aw, Max—"

"How many scientists are there here?"

"Just—just one, Max. You."

"And who invented the Audigel principle?"

"You, Max."

"And what did I bring you along for?"

"Because you don't have any use for other scientists. They're all nit-wits—" Peter's voice faltered, died. He looked at the floor.

"Well?"

"To—to fetch and carry, you said, Max—but you were just kidding. You told me when you first came into the joint I had as much science and talent as most Ph.D.'s in the field—"

"No, I was not kidding!" mimicked Max, in a savagely mincing voice. "Now get going, off the edge of the platform, toward that hole in the cliff over there. Go ahead, just step over the edge, idiot. Your personal bubble will merge with the bubble of the platform and let you through. Don't fall down! Why didn't I bring a donkey? It'd have more brains and no delusions of building up its own ego by a parasitic attachment to me."

"I hate you," muttered Peter under his breath, struggling up from his knees on the sand, and starting out toward the hole in the cliff.

"What?" demanded the harsh voice of Max behind him.

"Nothing, Max."

"Just keep walking. I'll tell you what to do."

They plodded forward across the

sand toward the hole in the cliff.

"What's in the hole, Max?"

"A tunnel."

"A tunnel!" Peter tried to crane his neck around and look back at his companion. "How do you know?"

"Because I've been here before. What'd you think?"

"Been here before!" marveled Peter. "Think of that. And all those other scientists back home haven't even got out of the atmosphere yet—oh Max, look! Look at that rosebush away up here!"

"Rosebush!" Max jerked his head around to stare about the landscape. "What rosebush?"

"It—it was right there a moment ago . . ." faltered Peter.

"Rosebush! No, wait—come to think of it, it's probably one of the projections. Pay no attention to it."

"Projections?"

"Pictures! Pictures! You can understand that, can't you? Like on a movie screen—only there's no screen. Also it didn't look like a rosebush."

"It did too, Max. I saw it."

"Well you were wrong," snorted Max. "They didn't know anything about rosebushes. It was just a projection of colored light that reminded you of a rosebush. It wasn't even actually there. If you'd walked into it, you'd have gone right through it."

They went along a few more steps in silence.

"Max?"

"What is it now?"

"Who's *they*, Max?"

"Martians," said Max, briefly.

"M-M-Martians?"

"Watch where you put your feet! Of course, Martians—or whatever the people called themselves that lived here. You don't have to sweat with fright. They're all gone, now."

"G-gone where?"

"That," said Max, grimly, "is what I'm here to find out. That's why I kept my secret of the Audigel Principle. I'm going to be first, from now on. First on Mars. First on all the planets. First to go out among the stars and unlock the secrets they've been hiding. No government interference for me, thanks, so men with half my brains can steal my discoveries, rob me of credit. I'll show them all—"

"—Max!"

"Imbecile!" screamed Max. "What d'you mean? Yelling at me when I'm talking?"

"I . . . I'm sorry, Max."

"Well, what is it?"

"I saw something else, Max. I couldn't see what it was, it was gone so fast—"

"Projections, I tell you! All right, now." Max came around from behind Peter and took the lead. Looking at him Peter was rather surprised to see that Max was himself carrying nothing but a small camera clipped to the belt of his jacket. Otherwise, except for ordinary clothing of pants, shirt and shoes, he was unburdened. "Come

on. We've got to go a good ways yet through this tunnel before we come to the city. Don't dawdle."

"I'm not — dawdling — Max," panted Peter.

"I'm not dawdling, Max!" mimicked Max. "No, no, I'm not dawdling! Sweat off about forty pounds and you might be able to walk at a decent pace. Come on." He turned on a powerful flashlight that searchbeamed down a long, circular walled corridor with walls of highly polished stone, cut straight into the cliffside, and led off.

"Wait for me, Max!"

Peter hurried after him. His insides felt sour and bitter with emotion. He wanted to kick something, but there was nothing around to kick. He fell back on his usual method of consoling himself by thinking what it would be like when he got back from Mars. He would be famous. Audigel and Tomfoyl, those two intrepid scientists. He would get rich from television appearances. He would have his own man to do things for him. Come here, you! Bring me my breakfast in bed. Hurry up! I haven't got all day! And how he'd show everybody back at the joint—

"Keep up! Or I'll leave you in the dark!"

"Yes, Max . . ."

Max was so far ahead now, Peter hardly got any help from the flashlight. If the walls weren't so shiny that they bounced some light

backward as well as forward, he wouldn't be able to see at all. And the tunnel was widening out now, with other tunnels branching off from it. And there were big, perfectly round holes in the floor to go around—and other things standing in the tunnel to go around too. They might be what Max called them, projections, but Peter wasn't going to walk into them if he could help it. Even if he could walk through them.

"I'm not going to wait for you, so you better make the most of it!"

"I'm coming, Max!" called Peter. "I'm coming just as fast as I can."

And anyway, that *had* been a real rosebush that he saw outside on the sand. He guessed he knew a rosebush from the way it looked. There were the roses and the leaves, and even the thorns. It had been a regular rosebush, just like back home outside his rooming house. It had been just about chest high on him, just about chest—

Peter caught himself suddenly, stepping squarely into one of the holes along the tunnel floor. He teetered for a wild, silent moment on the brink—and then fell.

The shock of his landing was nowhere near as bad as he had tensed himself for. He had landed on something firm-textured, yet yielding. Reaching down a cautious hand, he felt it. It was stone-temperature, the same as the tun-

nel walls, but with somewhat the grain and feel of canvas. He struggled to his feet.

Above him, he could see faintly the dim circle of the hole itself, the lip perhaps four or five feet over his head.

"Help!" he cried. "Help! Max!"

The close walls about him seemed to distort and smother his cries. His voice barely left his lips. It was absorbed by the pit into which he had fallen. Above him, the dim reflected light from the torch up ahead in Max's hand was growing dimmer. Max had neither heard him, nor looked back to notice he was missing. Peter's heart leaped into his throat.

"Oh . . ." he whimpered. Frantically, he groped about him in the dark. There must be some way to get up out of here. Something, some handholds to climb up, a ladder . . .

He bumped his nose on it.

Jerking his head back, he rubbed the small, button shape of the nose, blinking the tears from his eyes, and moved forward to check again. It was, indeed, a ladder. A short wooden ladder leaning against one side of the pit.

Joyfully, Peter scrambled up it, onto firm flooring again. Up ahead of him, the flashlight had been turned in his direction. Max was yelling.

"Where'd you go? Come on up here. I need some of that stuff you're carrying."

Peter broke into a clumsy run. He galumphed forward.

"I fell in a hole," he called.

He found Max standing before a large, ornate piece of grillwork that blocked the tunnel. It was like a large screen of intricately carved ivory, carelessly thrown down in their way.

"Here," snapped Max. "This thing's fallen over on its side since I was here last. I'll have to break it out of the way. Where's that hammer?" He stopped and peered at Peter. "What's that you said? Fell in a hole?"

"Yes, and if I hadn't found the ladder, I'd never have got out, Max."

"Ladder? These people didn't use ladders—or stairs, or anything else."

"Well, there was a ladder in this hole. A wooden ladder."

"Oh, shut up!" said Max. "I've had enough of your stories. Just because you couldn't keep up—Give me that hammer."

He jerked the hammer out of the loop by which it hung from the pack-sack on Peter's back. A few swift blows of the metal head and the screen collapsed in shards.

"Now come along," snapped Max, punching the hammer back into its loop. "We're almost there."

"Where?" asked Peter, trotting after him. But Max did not answer. And, after a few seconds, an answer became unnecessary, for they turned a blind corner in the

tunnel and emerged suddenly into open air.

They found themselves standing in what appeared to be the heart of a city surrounded by a palisade of small but jagged mountains.

"Look at the screwy buildings," said Peter, marveling.

All about them, some no higher than a single-story cottage, others towering to a height equivalent to eight or ten stories, were walls of every shade and design. Some richly marbled, some single-toned, dull, brilliant, even a few that seemed strangely luminescent for anything in bright sunlight. Streets, or what appeared to be streets, wound crookedly between them.

"So you think they're buildings," said Max, with some satisfaction apparent in his voice.

"Huh?" said Peter. "They *are* buildings, Max."

"Fools, fools—the human race is made up of fools!" But Max did not sound too annoyed. He consented to explain. "These people—Martians if you want to call them that—had no use for buildings. I found out that much when I came here the first time. What they were, I haven't quite settled that. But they didn't *need* buildings. These"—he waved his hand about him—"were objects of art, pieces of virtu."

"Pieces of what, Max?"

Max laughed.

"Come on," he said. "Let's see . . . we go this way . . ." He led

off between two of the walls on one of the twisty little streets.

"I'm right behind you, Max."

"Well, stay off my heels, blast it!" barked Max. "Now, come on!"

They penetrated into the multi-colored maze of the city, as Peter continued to think of it. As they went along, he began to see what Max had meant about these not being buildings. Some of the walls had gaps in them, or perhaps two walls would not quite come together at a corner. When this happened, Peter was able to look inside. And what he saw was that most of the buildings, or whatever they were, did not have roofs. Or, at least, all they had was a little piece of a roof, though there was one that was all roofed over.

Nor was there any furniture, staircases or windows to be seen inside the walls. Instead, there were all sorts of odd colorful shapes, sitting about apparently at random, or stuck to the walls. Some walls enclosed things that looked like mazes, or masses of cubicles. Some were honeycombed in intricate patterns. Some had a light sort of latticework roofing them in, but were otherwise empty. Only a few had any covering that really blocked out the light of the small sun burning high overhead.

"Gosh, Max," said Peter, "but you know it's kind of peaceful here? Kind of nice."

"Shut up!" snapped Max. "I'm trying to remember the way."

"I just said it was nice, this place."

"*Nice!* Shut up!"

"Yes, Max."

Max was prowling around restlessly, every so often referring to a pencil-drawn map he held in his hand.

"This way," he said. "Now we turn here . . ."

"Max, I'm hungry."

"We'll eat later. Let's see . . . down to the right here . . ."

"Max," said Peter, dreamily, wandering among the walls. It was no trouble to keep up with Max now, with all the pausing and checking he was doing. "Max, you know the old man you used to work for? The one who helped you build the first Platform—the one who was so dumb even if he was a Nobel Prize winner and died just before you got the Platform finished?"

"Shut up!" said Max.

"Well, I was just only thinking how much he'd probably like all these things here," said Peter, hurt. "You said he had all those paintings and carvings he paid so much for."

"I said shut up," said Max. He had come to a full halt. "Something's wrong here."

"Wrong?"

"There's something wrong with this street. It isn't the right way."

Peter was looking up at one of the walls.

"There's a sort of a sign here," he

said. "But it doesn't—I mean it's not English."

"Sign?" said Max, whirling around. He looked up on the deep, glowing royal-purple face of the wall Peter was pointing at and saw what appeared to be a short column of something like cuneiform writing inscribed in gold. Max glanced suspiciously from the upright column of markings to Peter, and then back to the column. He muttered under his breath, examining the column.

"We go right," he said at last. And led off. Following, and looking back over his shoulder, Peter could see nothing but the blank purple wall.

"Max—" he started to say. Then shut his mouth. Max was mad enough at him, already.

They continued on deeper into the city, and came up short at last before four towering walls of scarlet enclosing a square. They loomed over the surrounding walls and it was impossible to see if they possessed a roof. There was more cuneiform writing on the wall they faced.

"What does that say, Max?" asked Peter.

"It's the library."

"No kidding?" Peter goggled at the wall. "You're pretty good to read that right off, Max."

"Did you think I'm as dumb as you?" said Max. "My first trip up here when I saw that, I knew there must be an equivalent of the Ro-

setta Stone around. So I went looking for it."

"I'm not dumb!"

"Come on!"

Max led the way around the building. Three-quarters of the way around, when they came to the third wall, Peter saw that this one contained a small door set flush with the ground. The door was about five feet in height and about four in width; and it fitted tightly with hardly a seam to mark its outline.

"All right," said Max, as they halted before it. "Stand still."

Peter obediently came to a halt and stood while Max relieved him of all the equipment Max had packed on him before they left the Platform. Most of it was camera equipment, but there were a number of other small items, including a thick looseleaf notebook and what looked, when Max took it out of its packaging, like putty.

"What's that?" Peter asked, reaching out for it.

"Don't touch it!" snapped Max. "That's a plastic explosive."

"You going to blow the whole building up?"

"No, you idiot. Only the door."

"Oh." Peter turned and wandered over to the door, leaving Max sorting things and muttering in his beard. The door was, indeed, pretty tightly shut, he saw. There was a keyhole but no key. Maybe, thought Peter, it had dropped on the ground. He searched around

the base of the wall and, sure enough, found it about three feet off.

He took it over to Max.

"Here," he said.

"Get away!" growled Max, without looking up.

"But I just wanted to give you—"

"Get away!" roared Max. "And shut up! Don't bother me. I don't want to hear another word out of you."

Sadly, Peter wandered back to the door. Idly, he tried the key in the lock. It turned, and the door swung open. He went inside. Within, he found himself enclosed by a surprisingly vast single room, whose walls were the outside walls they had walked around, and which towered up to look rooflessly at the sky. But this was not the really surprising thing about the interior; for the inner sides of the walls were as black as shiny basalt, and they were covered, from the point at which they touched the scarlet floor to as far up as the eye could reach, with fine, endless rows of the cuneiform figures embossed in ivory-white. Peter stood back, craning his neck to see how far, far up they actually went.

"You!"

It was Max's voice, bellowing. Peter turned to see Max coming across the scarlet floor toward him, his beard bristling and a wild red light in his eyes.

"What'd you do? How'd you open that door?"

"I only used the key—" Peter shrunk away from him. "I was going to give it to you—"

"Key? What key?"

"The key in the keyhole—"

"Key!" screamed Max. "There is no key! There's no keyhole! Do you think I didn't go over that door with a magnifying glass the first time I was here? Did you think I couldn't see just now?" He drew back a fist and drove it suddenly into Peter's face. Peter felt a terrible, crunching pain and fell back, covering his nose with his hands. "I've had enough of your lies. What'd you do?" He hit Peter again, following him up as Peter stumbled blindly backward to get away. "What did you do? Answer me! Answer me!"

He drove Peter finally into a corner between two of the walls and pounded away at him until Peter collapsed in a moaning heap. Finally, Max stood still, hands clenched at his side, breathing hoarsely.

"You won't tell me," he said. "Or you don't know. Oh," his voice sank to a venomous, tearing whisper, "*if you only weren't so damn stupid!*"

Peter said nothing, sobbing against the scarlet floor. He heard Max's footsteps move away from him. After a while, they came back and he heard something dropped with a soft *plop* beside the hands that shielded his eyes.

"There!" grated the voice of

Max. "Fill your belly and stay away from me. I've got everything a race ever learned, here at my fingertips. And a greater race than the human one ever was. Can you understand that? Answer me!"

"Yuh . . ." choked Peter.

"This was destined! Can you understand that? It was destined for me to be the first one here, to learn all this. From the first moment I saw the Platform within my grasp—it was destiny driving me. All this was waiting for me, here, left by a race of people that weren't human, that were something even I haven't found out yet. The records I found—the records I found"—Max's voice beat on Peter's ears thickly, like the voice of a man sputtering on soapsuds—"they show them different, different, always different. But now I'm at the heart of it. Here. All the records are here. And you're not to disturb me until I find what I want. Do you hear? Do you hear?"

"Uh-huh," mumbled Peter.

"You better hear. If you bother me—if you cross me—I'll crush you, like some fat slug in my garden. I'll break you. I'll abolish you. I'll destroy you. Take that—"

Peter cried out, huddling away from the hard toe of Max's boot.

"That's better," said the voice of Max. And the sound of his footsteps walked away.

For a while longer, Peter stayed curled up, not daring to move. Finally, he peeked with one tear-

wet eye through the spread fingers of his hand. Max was far off, clear across the large single room of the building, down on his hands and knees by the bottommost rows of cuneiform writing. He was copying them on pieces of paper and referring to the looseleaf notebook.

Sniffing, Peter cautiously uncurled and rubbed a blubbery hand across his eyes. He sat up in the corner, with his back against the two walls. His face hurt and his stomach hurt. Something white caught his eye; it was a package of sandwiches done up in a plastic wrapper, lying on the floor by his foot. Sniffing dolefully, he reached out, picked them up, and slowly began to unwrap them. They turned out to be thick slabs of ham carelessly thrust between perfectly dry slices of bread. A sob caught in Peter's throat. Max knew Peter liked a little butter and mustard on his sandwiches; but just because Max didn't care one way or another, he never put anything on them. It was a dirty, dirty trick.

Drearily, he began to comfort himself with small nibbles on the topmost sandwich. It wasn't fair. He took a large bite and chewed on it morosely.

It was all Max's fault. He thought he was the only scientific genius there was. While Peter could remember any telephone number you told him, forever. Or he could look at the numbers on the side of

a boxcar once and then, months afterwards, tell you just what they were. Max couldn't do that. And whenever Max couldn't do anything and Peter could, he got mad. Peter never forgot a face or a name, but Max did. Actually, Peter was a bigger genius than Max was—

Peter found his hand was empty, and reached dreamily for another sandwich.

Take right now, for instance. Max couldn't have made it this time without having Peter along to carry the equipment. How'd he be right now, if he didn't have that book and stuff Peter had carried? Suppose Peter had really got stuck in that hole back there. He swallowed and reached for another sandwich.

The ham and bread felt good in his stomach. No wonder he hadn't been able to keep up so well—he'd been weak for food. Yes, Max wouldn't have got very far without him along. No, sir! It took somebody with muscle to carry all that stuff. And that's what Peter had. Why, if he'd wanted to, when Max was pushing him around, a while ago . . .

It took intelligence, too. Peter groped for and found another sandwich. Actually, he was probably more intelligent than Max. He'd found the way in here—that key, and the sign farther back. That was because he was busy figuring things out in the back of his

head. Subconsciously, he was quite a genius. Remembering the numbers proved that. He could find a sign or a key or—or something—when Max couldn't. Actually, there was a pattern to all this. Take all those things he'd found. They were facts; and you built a theory from facts. Whenever Peter wanted a fact, he could find one. And it'd be whatever fact he needed. Peter fumbled without looking for another sandwich, but the paper was empty.

That was just like Max. He never made enough sandwiches, either.

But there, see now, this theory—where'd all these Martians go? Well, they all died off. Sure. Except one, maybe, and that one was waiting around to see what they were like . . .

Peter glanced up apprehensively around him, suddenly, but there was nothing to be seen, except Max, busily at work across the empty floor.

. . . But this Martian would like Peter. He wouldn't like Max, because Max wouldn't listen. He'd give Max facts, but Max couldn't see them—like the sign, or the key. You know. That Martian was waiting around for someone like Peter, who was nice. And then he'd make himself into things . . . Peter started to reach automatically for another sandwich and then checked his hand. All gone. And then he'd make himself into things

to show Peter he'd be nice if Peter was nice back. Like that ladder. And the sign. And the key. Maybe the rosebush.

Sure, that was probably the Martian right there.

Just one more sandwich would make all the difference.

Peter sighed and looked down at the plastic wrapper on the floor. It was, as he had suspected, empty. But—he leaned forward suddenly—just outside it was another sandwich lying on the bare floor. It must have fallen out when he opened the package.

Grinning, Peter reached out and scooped it up. It was a real thick sandwich. He held it up in front of him and his mouth watered. He opened his mouth—

Sudden doubt struck him.

What if it *was* the Martian? Again? Being a sandwich this time because that's what Peter wanted now?

Cautiously, he lowered the sandwich and considered it.

It *looked* like a sandwich.

But what if it was really the Martian? And what if the Martian wasn't really nice at all? Or what if the Martian meant to be nice, but didn't really understand people too well, and didn't really understand what Peter wanted to do to that sandwich when he lifted it up to his mouth? Suppose the Martian didn't have any eyes or ears or anything like that. Just sort of feelings. So he could feel what Max

was like and didn't bother with him. And he could feel what Peter was like, and tried him, and felt Peter's feelings and tried to check on Peter through things like this, like turning himself into a ladder or a key, or a—

Then if Peter bit into the sandwich the Martian would find himself being eaten. Then he would be madder than Max ever was. And then . . . Max said Martians were greater than humans ever had been. If one got real mad, it would be terrible, Peter guessed. Maybe the Martian'd—

Sweating, Peter lowered the sandwich. He wouldn't bite into that sandwich now. No, sir!

He sat back and looked at the sandwich, sighing. His face hurt and his stomach hurt, and now he couldn't have a sandwich that was right before his eyes. A nice thick sandwich, too. Peter peeked inside it. Just as he thought; this one had butter and mustard on it, too. And he couldn't eat it. It was a dirty, dirty trick.

If the Martian didn't want to take a chance on being eaten, he shouldn't turn himself into a sandwich. It wasn't fair.

Actually, they were all alike, that Martian and Max. They never thought about you. Just about themselves. They thought they were the most intelligent. They'd find out some day.

"You!" said Peter to the sandwich. "You don't scare me!"

The Martian didn't, either. If Peter didn't eat the sandwich, it was because he just didn't want another sandwich. If—why, if he wanted to—that sandwich would be gone in two bites.

Sitting there like that in front of him!

"You!" said Peter. "You better hear!"

Sitting there like that in front of him to disturb him.

"I'll get what I want," said Peter. "You're not to disturb me until I find what I want. Do you hear? Do you hear?"

He scowled threateningly above the sandwich. He pinched it a little between his fingers and the bread gave.

"Oh, why are you so damn stupid!" he growled.

He lifted up the sandwich, slowly before his eyes. He gnashed his teeth at it.

"Can you understand *that!*"

He shook the sandwich.

"You better hear! I'll teach you!" He pulled the sandwich up in front of his bared teeth. "I'm not scared of you. If you bother me—if you cross me—I'll crush you like some fat slug in the garden."

He looked triumphantly at the sandwich; and it, the Martian, seemed to tremble a little in his grasp.

"I'll crunch you!" he hissed. "I'll abolish you! I'll show you who's boss! I'll *destroy* you! Take *that!*"

He bit viciously into the sandwich. He ate it all down (and it was delicious) and sat there for a long moment after it was gone, holding himself in like a bomb that expects to explode at any minute. But nothing happened, except he felt full at last and strong with good nourishment—better, in fact, than he had ever felt before.

Finally he relaxed. That Martian sandwich had learned its lesson all right. He'd showed it. It just proved what he was like when he decided to . . . He looked over at Max and frowned. It was time Max woke up to the fact that Peter wasn't just a pushover, too. Look at Max there, reading that wall. Maybe the wall didn't want to be read. Had Max ever thought of that? It was time somebody straightened him out on a few things.

Filled with a fine new sense of power and fury, Peter got to his feet and marched over to Max. His shadow, falling across the wall, made Max jerk his head up in exasperation.

"*Now* what?" he snarled. Then, suddenly staring at Peter, he checked and the color began to drain out of his abruptly rigid face. Peter, however, did not notice. He was too full of the fine new powerful words bubbling up inside him. He pointed a godlike finger of command at Max, and opened his mouth.

"Human," he said, "go home!"

Earlier in this issue you encountered Asimov the Scientist. Now let me introduce you to Asimov the Legend. Isaac Asimov is, I warn you, flatly impossible. Associate Professor at Boston U., he carries on a full-time academic career, with all of the reading and writing of learned publications that that entails. He also publishes frequent non-academic books of scientific popularization. As an author of fiction, he writes one long adult novel a year, plus one juvenile novel (by "Paul French"), plus uncounted short stories and novelets, plus articles, plus Gilbertian verse. In addition to two full careers, both overcrowded, he finds time to be a husband, a father, a lusty public clown (second only to Robert Bloch as a toastmaster) and—as is only fitting for the creator of positronic robots—a living doll, the most warmly likable man in science fiction.

Man? Mutant, alien, android, golem . . . ? Possibly there is some hint as to the nature of this being in the genesis of his newest story. At 8:00 in the evening of August 21, 1957, Isaac Asimov appeared on Boston's educational channel, WGBH-TV, as part of a panel discussing means of communicating science. His fellow panelists were John Hansen, a technical writer of directions for using machinery, and David O. Woodbury, author of such science-fact books as GLASS GIANT OF PALOMAR and LET ERMA DO IT. The latter suggested, as a gag, that Asimov should then and there write a story to illustrate his means of communication. Now a built-in Asimov characteristic (a positronic specification?) is the inability to turn down a challenge. So, starting completely from scratch with a new idea suggested by the evening's discussion, Asimov plunged straight ahead and, under TV cameras and lights, wrote a story and read it before the half-hour program ended at 8:30. And here it is—word for word as it was written on television, even to the retention of its one grammatical error.

Insert Knob A in Hole B

by ISAAC ASIMOV

DAVE WOODBURY AND JOHN HANSEN, grotesque in their spacesuits, supervised anxiously as the large crate swung slowly out and away from the freight-ship and into the airlock. With nearly a year of their hitch on Space Station A5 behind them, they were understandably weary of filtration units that clanked, hydroponic tubs that leaked, air generators that hummed constantly and stopped occasionally.

"Nothing works," Woodbury would say mournfully, "because everything is hand-assembled by ourselves."

"Following directions," Hansen would add, "composed by an idiot."

There were undoubtedly grounds for complaint there. The most expensive thing about a spaceship was the room allowed for freight so all equipment had to be sent across space disassembled and nested. All equipment had to be assembled at the Station itself with clumsy hands, inadequate tools and with blurred and ambiguous direction sheets for guidance.

Painstakingly Woodbury had written complaints to which Hansen had added appropriate adjectives, and formal requests for relief of the situation had made its way back to Earth.

And Earth had responded. A special robot had been designed, with a positronic brain crammed with the knowledge of how to assemble properly any disassembled machine in existence.

That robot was in the crate being unloaded now and Woodbury was trembling as the airlock closed behind it.

"First," he said, "it overhauls the Food-Assembler and adjusts the steak-attachment knob so we can get it rare instead of burnt."

They entered the station and attacked the crate with dainty touches of the demoleculizer rods in order to make sure that not a precious metal atom of their special assembly-robot was damaged.

The crate fell open!

And there within it were five hundred separate pieces—and one blurred and ambiguous direction sheet for assemblage.



Recommended Reading

by ANTHONY BOUCHER

FIRST EDITIONS ARE THE JOY OF COLLECTORS; and even for the average reader the original edition may be desirable in fiction or poetry, when the author's over-sedulous afterthoughts may have created a "better" but less inspired revised edition.

But a good non-fiction book gets better with every revision; and two of the most enjoyable and valuable books of the year are new expanded and corrected versions of books originally highly praised in this department and now even more urgently commended to you.

Willy Ley's *ROCKETS* (1944) has been almost a career in itself for our best popular writer on science. It has undergone two changes of title, three minor revisions, and three complete reworkings, of which the latest is *ROCKETS, MISSILES AND SPACE TRAVEL: REVISED AND ENLARGED EDITION* (Viking, \$6.75). The last revision was five years ago; and how important that lustrum has been in the history of rocketry you may judge from the fact that Ley's detailedly annotated bibliography (a wonderfully informative job, almost worth \$6.75 in itself) has had to be expanded

from 18 pages to 32. (In 1944, rocket-literature could be covered in 8 pages.) The author has scrupulously reworked the entire text, with important corrections and additions on almost every page, and added some 30,000 words of new material (plus a great deal more in appendixes). I suppose that, to the purist, "more definitive" is as obnoxious as "more unique"; but if Ley on *Rockets* was hitherto the definitive work on the subject (as it was), what is one to call it now? And with every added sentence, Ley proves anew that the responsible exposition of facts *can* be easily readable and entertaining.

Martin Gardner's *IN THE NAME OF SCIENCE* (1952) has been less intensively rewritten, but still enough so that even owners of the original should add to their libraries the retitled *FADS AND FALLACIES IN THE NAME OF SCIENCE* (Dover, \$1.50). And I hope that a whole new public may discover, in this cheaper and better distributed edition, what seems to me as shrewd and sensible a commentary on eccentric and unorthodox "sciences" as has ever been written.

Mr. Gardner is exceedingly hard

on science fiction readers (and editors) for the credulity with which they have welcomed such pseudo-sciences as dianetics. As a s.f. reader, you may find your hackles rising at times (especially on page 348); but precisely such a book as this is necessary as a corrective in the diet of the s.f. addict.

It's hard to write good s.f. in which all your characters are orthodox scientists: where's your story-conflict? Plots tend to be about the man with an unorthodox idea who is told by everybody that he's crazy but by God he's right after all; and from this, readers (and again editors) may go on a step to the belief that if everybody says a man's crazy, why then he *must* be right. This is a syndrome similar to that of mystery readers, who believe that anybody concerned with a murder trial may be guilty except the defendant. Obviously you've got more of a story if the man on trial is innocent; but in fact, an indictment for murder is by no means easy to obtain and—barring such extraneous elements as crooked grand juries or racial tyranny—the defendant is more apt to be guilty than not. There are far more untried killers at large than there are innocent men on trial. And again in fact, if all orthodox scientists unanimously say that a theory is untenable and absurd, the odds are enormously high that it is exactly that.

Mr. Gardner's accounts of what he calls "hermit scientists"—to which he has added almost 20,000 words of new up-to-date material—are lucid, witty and merciless. It's a book that should serve as a needed guide enabling readers to keep "science" and "fiction" clearly separated in their minds; and it's delightfully literate entertainment, a wonderful bedside book . . . if you can possibly stop reading before dawn.

Two recent books on American eccentrics include essays on hermit scientists and other characters of science-or-fantasy interest. Both Irving Wallace's *THE SQUARE PEGS* (Knopf, \$5) and Gerald W. Johnson's *THE LUNATIC FRINGE* (Lippincott, \$3.95) treat of that magnificent wench Victoria Claflin Woodhull, who dabbled in spiritualism as well as in presidential politics, high finance, the suffrage movement, publishing, and sex, professional and amateur. Johnson also tells of Ignatius Donnelly, who wrote s.f. and contributed to the foundation of the Atlantic cult when not occupied with the Populist movement or Baconian cryptograms, and Coin Harvey, who ended his days attempting communication with the future; and Wallace writes about Wilbur Glenn Voliva and his flat earth, Captain John Cleves Symes and his hollow earth and other paragons of paranoia. No matter how much one may join Martin Gardner in de-

ploring unscientific credulity, the fact remains that the American scene would be much duller without these imaginative eccentrics in the grand manner—and Mr. Johnson makes the sound point that in politics, unlike science, the “lunatic fringe” will, in another generation, seem to have been right all along.

Irving Adler's *MONKEY BUSINESS* (John Day, \$2.95), subtitled “Hoaxes in the Name of Science,” covers more material of this sort for a juvenile audience, but somewhat superficially and sketchily, I should think, even for the young. The author is, however, unusually good at clear simple mathematical exposition in explaining such matters as why the trisection of an angle is impossible—even when the “solution” is asserted by the Reverend President of Duquesne.

Since this seems to be F&SF's Special Isaac Asimov Issue, it's fitting that there's a new Asimov book for review. *EARTH IS ROOM ENOUGH* (Doubleday, \$2.95) is a collection whose uniqueness is indicated in its subtitle: “Science Fiction Tales of Our Own Planet.” There's a small inaccuracy in that subtitle since a number of the stories are pure fantasy, but that's a minor matter; what's important is that these are small-scale, immediate, *earthly* stories, at the other end of the spectrum from the galaxy-hopping Asimov of the *FOUNDA-*

TION series. As you'll remember from such stories as *Dreaming Is a Private Thing* (F&SF, December, 1955), this element of intimate immediacy brings out all the best qualities in Asimov's writing: warmth, humor, insight, sensitivity. The generous (80,000 words) book contains a long novelet (*The Dead Past* from *Astounding*), 9 short stories, 5 short-shorts and 2 samples of Asimov's dexterous Gilbertian verse. Even though 4 items have been previously anthologized, the distinctive pattern and the strikingly high level of quality make this easily one of the year's best collections.

If this department has been slow in covering Judith Merrill's *S-F, THE YEAR'S GREATEST: SECOND ANNUAL VOLUME* (Gnome, \$3.95; Dell, 35¢), it's partly because I find myself reluctant to admit, in cold print, that Miss Merrill can have edited a less than perfect book. Not that it deserves the annihilation attempted, with none too accurate an aim, by *Time* (August 5): it is a reasonably good collection, containing a few excellent stories (notably a fine Sturgeon novelet from *Galaxy*) and many readable ones, and it may even quite possibly represent the “greatest” of a not particularly distinguished year. (If it does, one foresees a new kind of reader-nostalgia, with the younger enthusiasts looking back to the Golden Age of the early 1950's.) There's some over-

emphasis on trivia and satire, a few too many stories-with-no-story, a marked lack of strong fresh ideas . . . and it's quite possible that these observations apply to S. F. Today rather than to Miss Merrill's judgment. There are still enough rewarding stories (by Abernathy, Budrys, Henderson and Knight, among others) to make this a good buy in the paper edition—and I never expected to hear myself so temperately recommend a Merrill anthology.

It's possibly even more surprising to discover that Jules Verne (whom *Time* seems to admire on the theory that the only good s.f. writer is a dead one) could write a bad book. HECTOR SERVADAC (1877), now reprinted as OFF ON A COMET (Ace, 35¢), is Verne's only novel to voyage farther into space than the moon; and one hates to confess that its science is wholly preposterous and its fiction so thin in character and plot that one can hardly believe that the same man wrote AROUND THE WORLD IN EIGHTY DAYS four years earlier. This edition is "newly abridged and modernized"—a process which includes the omission of the fact that an unpleasant character is a Jew. (He is now "a Tunisian.") I'm in warm sympathy with the motives behind this emendation . . . and at the same time I can't help wondering if we are in for "modernized" versions of such classics as OLIVER TWIST, THE MER-

CHANT OF VENICE and THE HOLY BIBLE. (Let's see: if we make Judas a Roman working under cover . . .)

Fortunately there's also prime vintage Verne on tap in THE MYSTERIOUS ISLAND (1875), all three volumes and 225,000 words of which appear in one book of the Rainbow Classics (World, \$1.75), with an introduction by May Lamberton Becker and copious (and admirable) illustrations by Henry C. Pitz.

New s.f.: Jerry Sohl's THE TIME DISSOLVER (Avon, 35¢) poses a startling case of *amnésie à deux* as a man and his wife wake up strangers, each with the past eleven years erased from his/her mind. The build-up is mysterious and suspenseful, and the solution almost plausible; despite a badly overdrawn villain, this is a good bit more readable than Sohl's earlier s.f. novels. . . . Jeffery Lloyd Castle's VANGUARD TO VENUS (Dodd, Mead, \$3) is about how flying saucer pilots are Venutians (as the author insists on spelling it), who are descended from the Egyptians who colonized Venus *circa* 4182 B.C. The presence of an Earth woman drives them mad with desire. . . . Honest. And in hard covers, too.

If you ever happened to read a minor Poe story called *X-ing a Paragrab*, you may have been struck by how very little enter-

tainment Poe managed to derive from the essentially amusing notion of writing without using any o's. This type of gimmick (which is technically known as a lipogram) is uncommon in English, and uncommonly difficult; but you'd think it was the simplest firework in a writer's basket of pyrotechnics from the effortless sparkle of James Thurber's *THE WONDERFUL O* (Simon & Schuster, \$3.50). In addition to the spectacular lipography, there is an adventure and a fantasy and a fable and . . . Look: one flatly cannot "review" Thurber. One can only view, and be dazzled.

This department has strongly praised Edward Eager's *HALF MAGIC* (1954) and *MAGIC BY THE LAKE* (1957) as wonderful fantasies in the Nesbit-Anstey-*Unknown* tradition, published as juveniles but welcome reading for adults. Now I discover that I somehow missed an Eager volume in between. *KNIGHT'S CASTLE* (Harcourt, Brace, 1956, \$2.75) takes four modern children into the world of *IVANHOE* and has grand sport applying logical magic to Scott's

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events to shape them closer to the heart's desire. Possibly minutely less good than the two *MAGICS*, it's closely related to them as part of a tetralogy, the last volume of which (*THE TIME GARDEN*) will appear next spring; and the interrelation of the books and their characters offers one of the finest devices in the history of time-magic—so beautifully planted and underplayed that you should discover it for yourself.

Collectors' note: Jack Lewis and George Hopkins are planning to publish soon, through Fantasy Publishing Co., Inc., a highly desirable *WHO'S WHO IN SCIENCE FICTION*. This will be a volume of some 80,000 words containing a complete checklist of all stories in the s.f. mags from 1953 through 1957, with biographies (and usually autobiographies) of all frequent contributors during the period. The estimated price on publication will be \$5; pre-publication orders at \$4.50 may be addressed to Jack Lewis, 7942 Jefferson, Kansas City 14, Mo.

As if a highly susceptible editor did not have troubles enough with the charms of female writers, there is the even more delicate problem of the male writers' wives. . . . No: on sober reflection, it would be impolitic (as well as impossible) to attempt to do verbal justice to Carmen Edmondson. I shall content myself with the statement that her husband has once more compressed into a short story the material for a full-length novel, this time on the theme of survival after atomic devastation, and has freshened the theme with an ironic but resolute vigor—making it a story particularly recommended as a corrective to the supine futility of Nevil Shute's currently popular ON THE BEACH.

Renaissance

by G. C. EDMONDSON

SINCE THE SUMMER OF 1952 WHEN he answered a blind ad for an artist and met the lady who financed his expeditions, the life of Oswald Friedlander, Ps.D. had been dedicated to warning humanity that the world was coming to an end.

Oswald had a sneaking suspicion that his patroness had scragged her husband for the insurance money and was using Oswald's talent to ease her conscience but it made no difference to him. Oswald so loved his work that he would have done it without pay. The Chicago widow's contribution was pure gravy. Still, it permitted him to buy a much better grade of paint. He experimented with light reflective pigments until other

gentlemen of the trade nicknamed him Johnny Hell for the peculiar brilliance of his blue flames.

One day along Highway 80 between San Diego and El Centro, just as he was putting the finishing touch on REPENT YE SINNERS, THE END COMETH, the first bomb went off. Careful craftsman that he was, Oswald merely glanced over his shoulder and muttered, "I told ye so." After a moment's deliberation he outlined the blue hellfire with chrome yellow.

Historians with a sufficiently detached viewpoint would have called it World War III but it detached all the historians so suddenly they didn't have a chance.

Those who survived possessed a certain immunity to gamma radiation and thus had little to worry about except a collapsed economy, some bubonic, some Russians who didn't know the war was over, and Oswald Friedlander, Ps.D. The next time we pick him up he's still warning a group of survivors that the world's coming to an end. Oh, about that Ps.D., he got it from the College of Universal Truth and Erudite Balderdash. Mail order, \$15 C.O.D. He thought it added class to his calling.

By the time somebody got sick of listening to Oswald the situation was well in hand. The hand belonged to Sergeant Major Arn Aalstrom, USMC.

Destiny and the personnel division work in strange ways. Sergeant Major Aalstrom attained his rank of Commandant, U. S. Marine Corps, by processes of succession and elimination.

A youthful proclivity for Kelly pool had earned him the position of BAR man—Browning Automatic Rifle to the uninitiated. Some tactician thought that farm boys who supposedly grew up, rifle in hand, could be outshot by citified pool sharks. The only citified pool shark this general ever saw shoot had, between games of pool, ridden shotgun on one of Capone's beer trucks.

Private Aalstrom couldn't hit the hornless end of a bull with a scoopshovel. The platoon sergeant

knew this but Aalstrom was a tow-headed lad of brawn and willingness. The BAR weighs twenty pounds at parade rest and sixteen tons after the first mile so he was allowed to carry it. There was an understanding that when time to fire came Aalstrom would relinquish control to a lanky ex-moonshiner from Kentucky who couldn't shoot pool. He shot revenooers.

In spite of strict orders to keep his conjugative hands off of it, Aalstrom tried to field strip the BAR at every opportunity. The fact that his reassembly invariably produced leftover pieces had much to do with this injunction. When the sergeant nearly caught him one morning he slipped an extra piece into his pocket and forgot it. A little later thirty Imperial Japanese Marines banzaied across the meadow, waving thirty big hairy bayonets. The first burst drove the BAR's breech block far enough into the moonshiner's skull to relieve him of any personal interest in subsequent events.

The last Jap killed, the platoon sergeant took time to express his impatience with the future commandant. The sergeant, Aalstrom, and two other privates were all that remained of the platoon. The privates lasted just long enough to be killed by the next wave.

A First Division AMTRAC came and scooped up Aalstrom and the platoon sergeant in the

proverbial nick of time. The sergeant died on the way back so the final score was fifty Japs and twenty-eight Americans. On recovering from various scratches and bruises, Aalstrom was awarded the Bronze Star and three stripes.

He killed half of another platoon before somebody transferred him into the quartermaster dept. There he lost no time in supplying the Iceland garrison with pith helmets and South Pacific marines with mukluks. Eventually somebody transferred him back to the States for a bond tour and recruiting duty. The Army started coming into its own.

In spite of Aalstrom World War II was won. He stuck with the Marine Corps until time and dimming memories brought the exalted rank of Sergeant Major. Higher no man can go without metamorphosis from manhood to gentlemanhood.

One war taught those willing to learn that his presence at the front spelled national disaster so he stayed on recruiting duty. In the third war, twenty years later, Aalstrom's survival at the rear spelled even greater disaster. He was as impervious to gamma radiation as he was to cerebration.

There might have been no survivors at all had it not been for Lloyd Yerrington. Yerrington had survived thirty years of sea duty as a machinist's mate and belatedly realized an ambition to be a

ham operator. His farm on the California coast was first in the path of radioactivity. The prevailing sea breeze gave him the first place to become reasonably cool. It also left him one heifer, sole survivor of its breed. Yerrington recorded an endless tape and fed it into his transmitter, asking for a bull. No bull ever came but thirty people did, Sgt. Maj. Aalstrom among them.

In addition to being Commandant, U. S. Marine Corps, Sgt. Maj. Aalstrom was now President of the United States. Since the Marine Corps is subordinate to Navy brass, Yerrington insisted that as Chief Petty Officer, USN Ret'd, he outranked Aalstrom. With a rare stroke of diplomacy, Aalstrom parted Yerrington's gray hair with the slide of a .45 and the succession changed.

The President's first official act was to declare martial law. Everyone was drafted into the Marine Corps. His second act was to detail mess cooks. The thirty-man-and-woman corps ate the heifer, thus botching any possibility of the human race's ever tasting beef again. A week later they finished the last ham in Yerrington's smoke house. A month later they finished the last of Yerrington.

A day or so after this they dishonored Oswald Friedlander, Ps.D., the prophet of doom.

Adversity brings out the best in men. President Aalstrom con-

cluded that summary slaughter was not consonant with the American Way of Life. Moreover, it was unmilitary. He solved all problems by the book and the book was alphabetical. The A's came first in chow line and the Z's came first in chow. The fact that Aalstrom might be said to enjoy some advantage under this system must be dismissed as pure libel. Besides, he had the gun.

A Mr. Zimmerman was so thoroughly incensed that, on hearing this order, he broke ranks with great suddenness and was across the yard and into the brush before anyone remembered his name. The president wasn't about to waste his few bullets on a moving target so Zimmerman was written off as poor founding-father material. Any man who'd break ranks was obviously subversive.

Just how subversive was demonstrated two nights later when a fire started in Yerrington's haystack. There being no cattle, the fire did not damage the economy but all hands turned out to watch it. The diabolical Zimmerman removed a certain Gladys Zybyisko from the barricaded smokehouse while others were watching the fire. When citizens railed at this perfidy and tried to organize a rescue force Aalstrom shrugged. He rightly concluded that Miss Zybyisko didn't want to be rescued. Anyway, they'd both starve soon enough.

As it happened, they didn't. Zimmerman was from the Jackson's Hole country and knew what real winter was. He had moved to California three years ago at the insistence of a wife who disliked Wyoming.

Zimmerman hadn't wanted to move. He'd had a small machine shop on the edge of town and twenty good acres of bottom land behind it. With work of infinite variety, inventing and repairing machinery for neighboring ranchers, fattening a few steers on the side, it had been a good life. Not exciting, but Zimmerman wasn't the sort who craves excitement.

His wife was. At fourteen she had moved from a town twice the size of Zimmerman's and never got over the feeling that she had been exiled just as youth and beauty were to flower. Marriage to Zimmerman had been a natural consequence of his owning the only hot rod in town. Too late she discovered that the ability to drive fast did not necessarily mean that Zimmerman was.

So the third war found Zimmerman in Southern California working in an aircraft plant, making payments on a house and clothes for a fading wife who took out all her disappointments on the nearest victim. Needing an excuse to spend more and more time in the basement, the victim took up radio. In time he acquired his mobile ham license. Though he had

never met Yerrington, he had talked many times with the retired chief as the mobile hams flexed the sinews of their emergency communications net while driving to and from work.

On the twenty-third day of the emergency Zimmerman used his civil defense Certificate of Preparedness to start a small fire where he camped for a night before abandoning the gasless car. He arrived at Yerrington's three days after Aalstrom and thus missed out on alteration of the presidential succession. Gladys Zybyisko arrived a day after Zimmerman.

Miss Zybyisko was a placid, bovine creature whose dumpy and overweight body accurately reflected her unhurried personality. As a beautician she had overheard enough hair dryer confidences to realize that beauty was not everything. At 28, she had concluded that a book and a box of chocolates were excellent substitutes for a man—at least, for the kind of man any girl with her figure could hope to land. She failed to consider that reading is the most vicious of vices and the one hopelessly incurable habit.

Miss Zybyisko was not fastidious in her reading. When her long widowed mother died Gladys inherited the total saccharine output of Gene Stratton Porter and devoured it with the same avidity which accounted for Gibbon's *Decline* in one weekend.

When her favorite client offered Miss Zybyisko a position as hairdresser and companion during a six months' coronary convalescence, Miss Zybyisko found herself in a hunting lodge belonging to her patron's husband. A sudden relapse sent the old woman back to the hospital and in the shuffle, Miss Zybyisko was abandoned for three weeks with a well stocked freezer, a fair wine cellar, and one solitary book. By the time she left, Miss Zybyisko had memorized *Fundamentals of Radio*. In a month she was a licensed mobile YL. And that was how she got to know Yerrington and Zimmerman. When the latter rescued her, Gladys hadn't had any books or chocolates for some time and skin draped in loose folds over her once plump body.

With a mountaineer's instinct, Zimmerman led the way from the barren coast toward the Laguna range, fifty miles inland. The coast wasn't as barren, he explained to Gladys, as it was going to be when the rains stopped and an irrigationless summer came.

Besides, he knew where he was going. When he got to the mountain top Zimmerman found a small village with food, clothing, power plant, and its own water supply. At one edge of the village were the famous Palomar telescopes. He had vague plans for putting a solar forge at Cassegrainian focus if he ever got time.

They wolfed a hurried meal in the bachelor astronomers' kitchen, then relaxed for the first time. Zimmerman's pot was gone and he felt ten years younger. The underbrush had ravaged Miss Zybysko's clothing, exposing large patches of a newly tautened body. She found a comb and used it as she sat, looking thoughtfully at Zimmerman. Zimmerman inspected Miss Zybysko from the changed viewpoint of a full stomach. Suddenly life was good again.

Even Southern California winters are cold at that altitude so meat in the freezer was fresh. With dry stores they were set for years. Zimmerman experimented with peas and beans and found some still fertile. He salted what meat he could and dried the rest before securing the light plant against the day when they could risk a trip down to the coast to hunt diesel oil.

He found enough batteries to light a house and rigged a wind charger from pirated equipment. One day they saw a fawn at the edge of the village. A week later a newly wakened bear strolled down the scentless street. There would be meat.

After the first rush of settling down they began listening to the UHF receiver Gladys built with parts from a calculator. A forest ranger up near Inyokern was calling daily. Zimmerman listened for several days, until he was sure the

president had forgotten about Yerrington's radio, before answering. After guarded soundings out they spoke frankly. The ranger brought a wife and twin baby girls.

Jane Stockham was thirty. Just as she had become resigned to a lifetime of teaching third graders Frank had come along. He was a large man, handsome in a red-necked British fashion. On his infrequent visits to town he had become resigned to flighty females who hovered about, inanely wondering what a ranger did all alone in the woods. Salesgirls and waitresses used his green whipcord uniform as a conversation piece, accusing him of membership in everything from the Secret Service to the Underground Balloon Corps.

Jane had been a pleasant surprise. When, one day, his jeep bumper intertwined with hers she was calmly and practically helpful. When she correctly identified his forest green without silly comment he was captivated. When they married, three months later, plain Jane had already blossomed under nature's oldest stimulus until even third graders noticed the difference. Perhaps they didn't live happily ever after but life at the lookout station had been a pretty fair substitute.

Jane and Gladys had Palomar replete with chintz curtains and lace doilies in no time. Zimmerman and Frank worked in the companionable silence of moun-

tain men, clearing small fields, trying to get the economy self-sustaining. Wheat was out of the question at that altitude but they sowed rye and barley.

The men practiced archery against the day when ammunition would be old and unpredictable. When Gladys pointed out that ingredients for black powder were available, they abandoned the bows and Zimmerman reworked several rifles into muzzle-loaders at the observatory's machine shop. Distrusting flint, he installed rechargeable silver batteries and coils in the stocks. A spark plug replaced the bolt. Interlocks in both grips made certain that microswitch triggers could not discharge accidentally. Finally, powder, wad, and ball packets were made of waxed paper. A jagged projection in the chamber ripped open the "cartridge" when a ramrod drove it home.

Gladys had a boy.

Frank and Zimmerman cleared as much land as they could work. Grain production scarcely balanced consumption and they were spending too much time at it, in spite of the thresher Zimmerman had rigged from a fan and concrete mixer. There was only one thing to do. When the women had learned to shoot they did it.

Knowing their indispensability, Frank and Zimmerman took exaggerated precautions on the walk to the coast. The Palomar moun-

tain road was badly out of repair where windfallen trees blocked hairpin curves, promising much perspiration on the return trip.

The men walked far apart, one covering the other as they crossed each clearing. Scouting, peeking cautiously over every rise before exposing themselves, they reached San Diego in three uneventful days. They gave Yerrington's farm a wide berth.

They skulked fearfully through the twisted remainder of San Diego, expecting discovery at every step but nothing happened. As a final precaution, Zimmerman set fire to a small shed in the Naval Supply Depot and they hid some distance away. When flames and the rattle of exploding small arms ammunition brought no watchers they felt reasonably safe.

After two weeks of pirating they were ready to return. The two caterpillar bulldozers made slow progress with their strings of tank trailers. Filling washouts, clearing windfalls, doubling up to get the trailers around switchbacks, the caravan was audible before it arrived at the village. Gladys and Jane alternated watches, expecting at any moment to see Aalstrom burst from the woods, attracted by the snarling roar of tractors, but nothing happened. The light plant would run again. Fields would be cleared and more rye and beans planted.

Gladys had another boy.

Jane had another girl.

Gladys had a girl.

Jane had a girl.

Jane started teaching first grade. Gladys worked out genetics charts for the coming population and began to feel vaguely worried. She told Zimmerman and Jane told Frank. Then everybody worried.

After two nights of grim and preoccupied bridge, Jane broached the subject timidly. There was a sudden babble of conversation and suggestions. Zimmerman talked of artificial insemination without much conviction. Gladys pointed out how impractical it was for unskilled people to attempt complex techniques for doing what comes naturally. Without neighbors to disapprove, the new arrangement caused no friction. It was almost as much fun as bridge.

Gladys had a girl.

Jane had a boy.

Zimmerman worried about the lack of domestic animals. No cow had been seen since Yerrington's abortive attempt to perpetuate the breed. Aside from bear and deer no edible fauna existed on the mountain. Frank tried to tame a pair of fawns. They wondered if deer could ever be bred up to produce milk efficiently. When a doe came fresh Zimmerman swore it was as good as goat's milk but his was a minority opinion. The babies continued breast feeding, occasionally augmented with canned milk which was growing scarce.

Gladys had a boy.

Jane had a girl.

Frank had gray hair.

Zimmerman had none.

Young Frank was fifteen. A line of blond fuzz ran down each side of his face, disappearing just before it reached his chin. Above and below his mouth a few coarse hairs heralded the advent of a beard. The younger children had been teasing him about it, making odious comparisons with the luxuriant growth which sprouted between Zimmerman's biweekly shaves.

At length, Young Frank could stand it no more.

"I want to go down to the coast and get some razor blades," he insisted. He couldn't trust himself with the straight-edge razors the men used—or so he wished to believe.

They stalled him for several weeks but one day Gladys discovered that her son was hiding clothing and food in a tree crotch, some distance from the house.

"He's got to be on his own sooner or later," Zimmerman said; "we might as well make it legal." So Young Frank was properly outfitted.

Two days later he stepped off down the switchback road, sleeping bag, pemmican, powder, ball, and an electrically triggered rifle slung over his youthful shoulders.

With a boy's lighthearted ability to borrow trouble, he headed

straight for Yerrington's farm. He wondered if President Aalstrom was still alive but mainly, he wondered if there was—just possibly—some fifteen-year-old girl he hadn't played, worked, and fought with every day of his life.

There was.

Her name was Alice Aalstrom. The President wasn't really her father but he said he was so it amounted to the same thing. Her mother was a widowed Mrs. Adams, formerly Zúñiga. When the alphabetical mess decree came, during the period of martial law, Señorita Zúñiga was one jump ahead of President Aalstrom. When he looked askance at "Adams" she announced that she was the widow of John Quincy Adams. Aalstrom didn't know how many hundred years President Adams had been dead but he knew when he was licked.

At that time President Aalstrom was 52. La Zúñiga was 23. Untoward circumstances had forced her to seek employment as a dancer on North Main Street at an early age. For those who know Los Angeles it is unnecessary to explain that North Main Street dancers are seldom señoritas in the strict Spanish meaning of the word. At any rate, she was magnificently endowed and well instructed in the best ways to convert such endowments into cash. Had there been any other place to go, the women of Yerrington's farm might have asked

her to. But the widow Adams had had experience in subverting the designs of meddling welfare biddies so it is doubtful if they would have gotten very far.

When she waggled a hip at Aalstrom he decided the White House needed a first lady. The widow Adams accepted. What amazed the president was the number of perfectly logical reasons she had for needing a private room. After six weeks of waiting Aalstrom decided to enter the nuptial chamber, invited or not.

When he found the first lady *in flagrante delicto* with a presidential aide, one Pvt. Alvarez, he was aghast. By the time he unghasted, Alvarez had grabbed his pants and was out the window. For reasons of state the affair was hushed up. When Alice was born the President handed out cigars.

Fifteen years later she was a lovely latin doll with no hint of Aalstrom's towheadedness. The founders of Palomar all tended to fair and ruddy complexion.

Young Frank lay in the weeds near the spring. She had come twice that morning for water. The second time he had seen her from quite close up. He had scouted the farm carefully. There were four men, all old. None carried arms. The water bearer was obviously the eldest of the postwar generation. With insight rare for his years Frank deduced that they would not willingly part with her. He

also knew that a sudden acceleration of pulse and respiratory rate meant that he could not leave without her.

When she came for water again he made believe she was a deer and worked around until he stood between her and the village. She was startled but not nearly as frightened as he was. "Who are you?" he asked.

"Alice Aalstrom. Who are you?"

"Frank Zimmerman."

"I've heard that name somewhere."

Frank gawked at her, wishing for words. Reason said "express your thoughts." Instinct said if he did she'd run.

"Ma's waiting for this water," she said after a moment.

"You'll come back?"

She nodded.

"Don't tell them about me," he cautioned.

Without knowing why, she agreed.

Gone as he was, Frank did not throw caution to the winds. As the girl walked back to the White House he flag-tailed through the brush to a vantage point atop the hill where he studied the farm for unusual activity.

Alice deposited the pail of water beside the mud oven where her mother was kneading bread. "Who's Zimmerman?" she asked.

The First Lady pursed her lips with a glance at a splintering lawn chair where the ancient President

ruminated in the sun. Alice understood that it was one of the subjects to be avoided lest the old man start banging his cane about. She often wondered why they didn't let him get good and mad so he'd have another stroke but her mother explained that they felt an irrational affection for the irascible President who had, in spite of his limitations, piloted them through the first terrible years.

That night Alice crept from the house and made her silent way to the spring. Frank stepped from a shadow into brilliant moonlight and they looked at each other in mute awe. There had never been this awkwardness with brothers and sisters at home.

Alice asked Frank where he came from. Frank was instinctively vague but he spoke of electric lights which Alice had never seen. He talked of reading which she'd never had time to learn. He described the television programs which they played through tape recorders on winter evenings. Alice had heard of TV but she thought it was one of those half-forgotten legends like the god the old people occasionally talked of.

When she came for water the next day Alice brought him a fresh loaf. Frank had never tasted wheat bread before. He didn't much care for it but, like vanished millions of young martyrs, he praised a young lady's cooking extravagantly and devoured it under her watchful

eyes. That night they talked again.

Frank redoubled his accounts of Palomar's marvels until she was thoroughly convinced he was lying. Still, on the third night she brought the remains of a GI blanket and her other dress. As they walked toward Palomar Frank still thought she was coming to watch TV but, of course, Alice knew what she was doing. With the casual cruelty of the very young she gave not a hint to her mother.

Next morning her mother thought it odd that the girl should go fishing or hunting cactus apples so early but she didn't worry until later when she detected the missing blanket and dress. She remembered how her daughter had asked about Zimmerman and it was suddenly clear. To her surprise, Mrs. Aalstrom caught herself wondering how her own mother had felt twenty years ago when a daughter had left home to dance on North Main Street.

The President stirred long enough to ask why in blazes Alice hadn't brought his gruel and the news could be withheld only so long. He had another stroke in the midst of his vituperation against the despicable, rank-breaking Zimmerman. A day and a half later he roused momentarily, muttered something about "goddamn BAR" and heaved a tremendous rattling sigh. They didn't bother to elect a new president.

It wasn't until Alice had been set-

tled in Palomar for several weeks that Frank remembered he still didn't have any razor blades. Zimmerman flashed a toothless grin and stopped working on his new plate long enough to show the boy how to hone and strop a cutthroat razor. By tacit agreement safety razors were never mentioned again. Meanwhile, Alice had her troubles.

Though it had never been put in so many words, two Palomar girls had always known that one of them would someday bear Frank's children. After the shock wore off these former rivals united. Alice blossomed with bruises and scratches. Jane and Gladys watched anxiously, wondering what to do and how to do it. While they wondered the younger of the local girls magically acquired a mangled ear. Two days later the elder tormentor had the glazed look of one who has known horrors not meant to be seen. She had a cross incised in one cheek and a disinclination to discuss it. Alice taught the smaller girls to pierce their ears and the two older girls were on the outside, looking in. After a sufficient time Alice let them back in. Once again the succession had changed.

Like most husbands, Young Frank knew nothing of his wife's affairs. When the elders asked him to take a second and a third wife a year later, he did so with some trepidation.

Alice had a girl.

The cauliflower-eared girl had a boy.

The cheek-marked wife had a boy.

Much to Frank's surprise, the three got on beautifully.

The marked wife's boy stole a girl from Yerrington's farm. It was the first time he'd ever stolen a wife so he wasn't very expert. A half mile from the farm he slackened his grip a moment and the girl broke loose. In the excitement she ran so fast he couldn't catch her. Back on the farm, she resolved not to be in such a hurry the next time but he never came back. She spent her declining years frightening children with tales of the Zimmermen.

After bungling his wife-stealing, the marked wife's son came home. An unfortunate concatenation of chromosomes made him Palomar's most eligible candidate for village eightball. Eventually he found a soulmate and they produced nine mediocre children.

The Zimmerman-Zybysko strain bred true again in the third generation. The eightball's first grandson showed promise of an ability comparable with that of the original Zimmerman. At ten months he walked. At fifteen years he walked east, following the sunrise from waterhole to waterhole until he reached Arizona and—people.

He stayed to unravel the damage which isolation had done to their English and returned with a treaty

and eight packdeer loads of cotton cloth.

When he was seventeen he pulled off an even greater coup.

The Aalstroms of Yerrington's farm lived in an isolation beyond the wildest dreams of midwest senators. With daring equal to Perry's opening of Japan or, possibly, Jason's foray into the Black Sea, this Zimmerman opened Yerrington's farm. Lesser men had tried but the frustrated bride had done her work well. For generations noisy children had been sent supperless to bed with assurances that the Zimmermen would get them. All hard luck and every misfortune was attributed to the Zimmermen.

After an initial period of adjustment, stolen Aalstroms invariably surrendered soul and body to the comforts of mountain civilization. Nothing could induce the girls to return to the farm for missionary work. Zimmerman the explorer, Zimmerman the empire builder, broke this impasse.

One morning the Aalstroms awoke to the accompaniment of a minor fusillade and found themselves besieged. That a sole Zimmerman was attacking made it all the more marvelous. Brushing sleep from their eyes, they saw the Zimmerman standing carelessly in their yard. When an Aalstrom moved cautiously forward with a spear the Zimmerman gestured. Thunder spoke forth from the hill where he pointed.

As the elders scrambled backward the Zimmerman stood, god-like in his calm, muttering a mystic litany, "One mississippi, two mississippi, three mississippi," waiting for the fuse to burn down on his next bomb. He pointed majestically and the outhouse erupted.

To the Aalstroms, for whom the legend of gunpowder had retreated to the vanishing point, the effect was devastating. The Zimmerman distributed his skillets and scythe blades and left with a token packdeer load of wheat.

An Aalstrom elder spent several days burning green willow smudges in the Zimmerman's footprints, making ritual gestures of exorcism with a burned-out scintillometer. He wanted to destroy the scythe blades but was voted down. They were needed too badly. When the Zimmerman came back a month later the elder said, "I told you so," but the others shook their heads knowingly and said the priest had used the wrong words.

The Zimmerman had a son.

Fifteen years of commerce with Palomar brought the Aalstroms a step or two back up toward civilization but mothers still frightened children with tales of the Zimmermen.

Zimmerman the Explorer's son came down from the mountain. He hung around the Aalstroms' several days, trying to scrape up an acquaintance with one of those delec-

table lowland girls but with a name like Zimmerman it wasn't easy. He toyed with the idea of stealing a girl but he was afraid it might queer one of his father's deals. His father was favorably impressed with such a display of foresight at fifteen so he decided the boy deserved a break.

This break took the form of another expedition into Arizona. It was a long, dry trip and they lost two packdeer on the way but when Zimmerman the Explorer saw the look on his son's face he decided it was worth it. The young Zimmerman stood frozen as a pointer, gazing in absolute awe at the Mexican girl. While he puzzled how large dark eyes and shiny hair could have a wonder he'd never noticed in the results of Señorita Zúñiga's chromosomes back home, Zimmerman the Explorer gazed with equal reverence at the burro she rode.

He had seen burros in TV transcriptions but never in the flesh. Trim as the girl was, a packdeer could never have carried her. Burros would give Palomar a boost until such time as they could again build machinery. Father and son looked at each other.

It took a bit of haggling and the young Zimmerman couldn't understand Arizona English very well so he never did find out how many of the scythe blades were for the pair of burros. Since the girl came with them, he didn't care.

They headed back a week later, picking their careful way through the remains of Highway 80 with a deer-and-burro-trainload of cotton. On the fourth night out they camped by a spring in one of the switchbacks near the summit. The elder Zimmerman had been watching the packdeer carefully for the last hour. He suspected a carnivore of some kind was paralleling their trail from the way they spooked.

While the men hobbled the ani-

mals the bartered bride was gathering firewood. When she shouted the Zimmermen came on the run with rifles at ready.

The writing was blurred. The blue flames had washed away completely. Winter rains had nearly erased REPENT YE SINNERS but to one side bright and clear they could read THE END COMETH.

"Do you think it ever will?" the young Zimmerman asked.

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Clichés have their cycles of fashion. In the fictional portrayal of the American Indian, "the stereotype of the blood-thirsty Red Devil," as B. A. Botkin has said, "replaced the earlier stereotype of the Noble Savage"; and now the "adult western" of films and TV seems to be swinging back again to the Noble Savage, with frequent emphasis on the great Apache leader of the 1860's and '70's, Cochise. Oliver La Farge, with his incomparably intimate knowledge of Indian history and of Indians, has never succumbed to either stereotype. Only La Farge could give Cochise reality in the midst of a fantasy, and dignity in the midst of an outrageously comic tale—which starts out soberly as the most conventional of westerns but sneaks up on you as smoothly and happily as the Four-Eye Monongahela whisky that inspires its magic.

Spud and Cochise

by OLIVER LA FARGE

TOO MUCH LIGHT—TOO MUCH HEAT, too much sand and rock, but above all too much light made the desert intolerable, the brilliance striking everything to whiteness. Not the dead white of a painted board, but shades and variations, yellowish in a pale way over some of the sand, in other places greenish, rocks that might turn out purple if the sun went behind a cloud, mesas that might have red in their sides. The faint tones were mineral, weak but still harsh. What vegetation managed to live was also pale and ineffectual.

In the still air, the strawberry roan's hoofs stirred up a powdery dust-haze at each step, the fine stuff rose, covering legs and flanks and mane until the animal became a uniform, pinkish gray, it settled on Spud's spurs, his boots, his rifle in its scabbard, his threadbare blue jeans, his pistol, his cotton shirt, the yellow silk scarf at his throat, his straggly mustache, his leather face, and battered, wide hat. Spud was a small, pepper-and-salt man anyhow; now he looked like a flour sack with nothing in it.

He was too dry to smoke or

sing, too disciplined to let his mind run on drinks. He made himself easy in the saddle, forebore to count the miles that still lay between himself and Spareribs, and tried to occupy himself by observing the Mil Huesos desert. This was not interesting, especially since he had seen it all before. It took some thought to follow the trail. In many sandy stretches there was nothing to follow. Where the footing turned to what looked like cosmic cinders, or where it went over rock, there was a thin ribbon of special texture, something hardly visible, but which to Spud proclaimed the road. Alongside it he noted a scattering of dung on one place. That's the nearest thing to company I've had in two days, he thought. He watched it slide by him as the roan maintained his fast, monotonous, mile-eating walk. He lifted his hat an inch to cool his head, shifted his revolver to a better position, and settled even more slackly in the saddle.

A long, low, white ridge with greenish shading on its upper part ran out to a point a short distance ahead. That was where he would hit the main trail. He looked at the ridge, then over to the western mountains, a pile of stone skeletons, bluish without promise of growth or coolness, on the horizon, then back to the earth nearby. The bones of a horse came into view. I'll bet you was a godsend to the ants here, he thought.

A pillar of dust, like to his own but broader, rose from behind the ridge, moving slowly to meet his course. He touched the handle of his gun while he looked at it. Two horses, or a rider and a packhorse. Might be company. Someone coming from Spareribs. His gray eyes became careful, the dust-filled wrinkles about them drawing together.

Just at the end of the point the dust-cloud stopped, thinned, faded away. Spud became more watchful. Things that go out of sight, that act differently, require caution. He loosed the carbine in its scabbard, set himself almost straight in the saddle, and shortened his reins slightly.

He was near the point now. Over its low top he saw two horses, one saddled, one packed. As he cleared it he saw a person—a woman, for God's sake—sitting in the shade of her horse, hunched up, looking gloomy. She was all dust, too, her and her print shirt and divided skirt; from a little distance you couldn't tell anything about her barring that she was white.

Curious, Spud turned the roan toward her. A shotgun was slung from her saddle horn by a female arrangement of strings. She raised her head slightly, watching him coming without interest or friendliness. Her animals were poor, they stood with low heads at the end of hollow necks, their manes

were heavy with dust. He stopped a few yards from her, raised his hat and said, "Good evenin', ma'am."

"Evenin'." Her voice was neutral, her eyes ungreeting.

Curiosity still urged. "Hot, ain't it?"

"Yeah. It's hot. That's what this country's for."

"That's right." Spud untied his canteen. "Could you use a drink o' water? I'd be pleased if you'd join me, ma'am."

She smiled unexpectedly, as at a sour joke. "Thanks, yes."

He moved his horse nearer, reached down the canteen of more than tepid water, and watched her drink sparingly.

"I'm headin' for Spareribs," he said, bringing himself as near to inquiry as courtesy would allow.

"I'm headin' *from* Spareribs." She stressed the "from." After a pause, as though to make up for needless rudeness, she said, "I'm hittin' for Tucson and I figure to camp at Ojo Amarillo."

Spud glanced at the sun, well past noon, and said, "If you'll pardon me, ma'am, you must ha' started kind o' late. I don't think you can make Oja Amarillo today. I—I kind o' think maybe you'd do better if you come back to Spareribs and make a nice, early start tomorrow. You'd make it easy then."

"Thank you. I ain't goin' back to Spareribs."

"Yes'm." Spud felt rebuked. "Excuse me havin' interfered. I guess I'll be goin' along." He lifted his rein hand, then hesitated, looking again at the woman's face. Hard to make out under the dust, youngish anyway, familiar . . .

"I'll beg you to excuse me again. It jest kind o' seems to me I seen you somewheres before."

She sighed, then smiled slightly with one corner of her mouth. "Likely you have," she said indifferently. "Was you ever to the Golden Girl in Tucson?"

Spud was taken completely aback, unscated to the extent of saying, "Oh, are you—" before he could check himself.

"Yeah, I am." She wiped her mouth hard with the back of her hand and looked at it. "I was, anyway, and I guess I will be again. Right now it seems to have worn off."

Spud heard the humility, the sound of despair. He fumbled for words. He could think of nothing delicate, and finally came out flat with what moved in him.

"Can I help you any ways at all?"

She stared at him, curiosity, distrust, a little wonder. "I don't reckon. I'm hooked, I guess. Ear-marked."

Another pause followed. Spud took out the makings. "Will you have a smoke with me, ma'am?"

"All right."

He passed the makings down,

then rolled himself one. Indians are right about tobacco. The two smokes lit from a common flame, of herb from one sack, started a friendlier circuit between them.

She said, "I kind of remember you. You busted Buckskin Smith out the window."

"That was me."

"We was grateful to you. He was real ugly."

They smoked awhile in silence.

"I'll tell you," she said. "It'll do me good, and you're a nice kind of man. I don't mind tellin' you."

"I saved up some money, and I bought up the Dead Soldier Mine in Spareribs, figurin' it would pay all right as soon as the Apaches was chased away. Well, they been chased, for a while, anyhow, so I packed up and come out to Spareribs to work it. Do you know Snakeweed?"

"I do."

"Well, he's settled in Spareribs. He's got Spareribs and he's got my mine. So he tells me, if I want to work it, I can marry him. Snake-
weed!" Spud nodded. "There's limits to what a girl can take. So I'm headin' back. I tried to get out o' the corral, but I guess it's too high for me."

Spud studied her again. Young, definitely young under hard lines, bitterness, and dirt. Still a girl. He shifted uneasily. He'd made up his mind to his age, he was through with trouble. Still a girl, and wants to live nice.

She spoke again, relieving pain. "I figured there wouldn't be no one know me in Spareribs; I figured I could make a nice livin' off of that mine and by and by marry somebody. Yessir, that's what I figured. Only you couldn't marry Snakeweed, could you?"

"I never thought about him just that way, ma'am, but I guess not—no, he wouldn't hardly do."

"Well, I guess it's all right. I guess a girl like me ain't got no call tryin' to marry. It ain't on the cards."

"Don't you believe it, ma'am. Don't let 'em tell you that. Listen, I've been around some. I'm a quiet man, barrin' when I'm mad, but I didn't grow old settin' still. I've seen plenty. And some mighty fine wives come out of where you been." Spud paused. "Can you cook?"

"I can cook. I can make a flap-jack the size o' the fryin' pan and so light you got to be careful breathin' or it'll blow away. I can make a lemon pie that if you're settin' out on the front porch, your mouth'll water when I take it out o' the oven. I can make beans you'd swear was strawberries."

Spud nodded. "Them's qualifications." He shifted in the saddle. Trouble again. Back at it. "Listen to me, ma'am. Don't you go to Tucson. About five mile down the trail you'll see a yaller mesa. You take the left fork, and by and by you go down into Alamos Canyon,

and then you hit Alamos. It ain't much of a place, but it's all right. You go to the Bon Ton Hotel and Eatin' House—you can't miss it, it's nigh on to all there is—and ask for Hank Stromberg. Tell Hank I sent you and that you're to wait for me there. He'll take care o' you. He might give you a job waitin', if you wanted it. I'll take care o' Snakeweed."

"That's nice o' you, mister, but I don't think it'll work. I've read my cards. That's what they say."

Spud swung himself sideways and raised his right hand, shaking it once at her. "I'm Spud Flynn," he said. "I'm a half-blood Irish on my father's side and I come of a race o' kings; I know things more than what you just see. I know what's in the draw you ain't picked up yet, and I *ordain* that you wait for me at Hank's."

That was a good word, ordain, he thought, and wondered where he got it from.

The expression of her face changed slightly, became less hard. "But you can't handle Snakeweed. No offense, Mr. Flynn, but he's tough. It calls for an awful big man to get Snakeweed. You might get hurt."

"It ain't just size. I'll tell you, Miss—"

"Hartshorn, Elvira Hartshorn."

"Thank you, Miss Hartshorn. Well, this'll make it clear to you. I was in an awful hurry once. I'd rode my horse down and I was

pushin' along on foot with reason to get further. I struck a dry wash, too wide to jump, too steep to climb down. I was stuck. This was up in the Black Hills. And an eagle come by, and I roped him. He kept a-swingin' back and forth, tryin' to get loose, and when he was swingin' good, I jumped with him and we went acrost. It cost me a good maguey rope, but it worked fine. Well, that's what I mean. A heavier man couldn't ha' done it. It ain't all size. Nor I ain't fixin' to get myself hurt none."

"I guess you know yourself. I sure appreciate your tryin', Mr. Flynn."

"You can expect me in about—well—a week from tomorrow."

"Thursday week?"

"Thursday? You shore keep track. I kind o' thought it was Monday, but I hadn't really noticed. Thursday week, then."

She rose and they shook hands. "I'm pleased to have met you, Miss Hartshorn."

"I'm pleased to know you, Mr. Flynn. Wait a minute; I got something for you. It ain't much, but it's—well—something to show I appreciate what you're doin'."

From her saddle bags she took two peculiar flat, blue bottles. Spud's eyes widened.

"Take them along," she said, "they might be handy, or com-fortin'."

Spud knew the form of those bottles from dim memory. Four-

Eye Monongahela, liquor so good even barkeeps can't help drinking it, so rare that only twice in his life had he ever tasted it. Two bottles! Just thinking about them, he felt the springs of his old youth welling inside him. It's so long since I really been drunk, he thought, drunk like a hero.

"Thank you kindly, Miss Hartshorn," he said, lifting his hat. "Well, I'll be seein' you Thursday week. *Hasta la vista.*"

"Take care o' yourself."

The roan raised its head, awoke, felt injured, knew the spurs and returned to its fast, somnambulist walk. The dust rose around them again, the little rocks and changes of kinds of sand and ineffectual cactus growths slid by, dropped behind. A man needs a hatbrim under his chin, Spud thought, feeling the heat strike upward from the desert. Saves shavin'; all my whiskers is sizzled off.

And I'm through with gettin' drunk like a hero. Hell, ain't I made up my mind to my age? The ageless men is long gone; Pa allus said so. Flynn or no Flynn, my youth is gone. And now I'm in for it. Snakeweed. Well, it's worth it if he could be took away. He shore spoils the climate where he's at.

II

The sun continued its travel at right angles to Spud's course,

swung low, and poured under his hatbrim directly on his face. A clump of green, so emphatic in contrast that it appeared black, showed beyond a gray butte. Rounding the butte, Spud came into sight of a flat at the edge of which eight cottonwoods grew. Around them, craving the sight of their leaves, a handful of adobe houses and shacks of gray, dust-scoured boards were huddled, with a periphery of haphazard corrals. This was Spareribs, a place where you stopped on your way to somewhere else. But here, at least, there was a rest for man and beast, food cooked by someone else, and a corral to find your horse in in the morning. He rolled a cigarette as he drew nearer the settlement. He had the Four-Eye, too. That had to have a purpose, but he hadn't figured it out yet. There was a special place where it would come in; it might be for the purpose of alleviating Spareribs.

The sun had almost set when he stopped at the Rafter Lazy J corral. The boss came out, said, "Hello, Spud," and gave him the key to the hay room. Spud unsaddled, pulled out hay, filled the nose bag with oats and put it on the roan. Then he washed lavishly at the trough. The feeling of being coated with dust and dried-out sweat went away. He squatted on his heels, smoking, his spurs just touching his backside, waiting for the roan to finish his nose bag.

The sun was down, the air ceased to burn and became caressing. He blew smoke four ways. This was a daily pause, a time of complete relaxation between the day itself and whatever the night might bring; he'd think about Snakeweed later.

When the animal had turned to its hay, he went slowly, lazily, down the dusty, half-formed street to the Gold Mine Saloon and Eating Parlor and turned into it. There was a long, pine bar with a moderate equipment of bottles and two large, imperfect mirrors behind it. Along the other half of the room half a dozen tables were ranged. At the far end a gambler dealt against himself at a faro layout. Spud took him in—dressed in the usual black, with a diamond in his tie and another on his left hand, but shabby and thin. You could size up the town from him. The barkeep looked like barkeep; they almost always do.

Spud went to the bar and said, "Howdy."

"Howdy, stranger. What's your pleasure?"

"My pleasure's far from here." Spud jerked his head toward a bottle. "I'll take a shot o' red-eye, please."

"Help yourself." The barkeep passed him a bottle and glass.

"Can I get fed here?"

"We got steak and beans."

"I'll take steak. And another o' these."

"Help yourself."

The barkeep shouted through a little door, and pretty soon a Chinaman came out and laid the table. Spud ambled over and sat down. Four kinds of sauce in the bottles—long ago, this must have been a good restaurant. The Chinaman brought thin coffee, hot bread, a little bowl of canned peas, another of greengages. Minutes later he brought the steak. Spud ate steadily, industriously, without haste. Two X Circle X cowboys came in, then three Mexicans, drifting to the bar. By and by they went over to the faro layout. Spud could tell they were making about ten-cent bets.

There was a disturbance at the door, and Spud looked around. It was not exactly that there was any noise, only as the man entered, one was aware of it. Spud sighed. Here's Snakeweed, he thought, now things are going to commence. He finished his greengages and walked to the bar.

"Hello, Snakeweed."

"Spud Flynn! Why, hello, Spud."

"How about a little nosepaint?"

"Suits me."

"Barkeep, a couple o' fingers o' tanglefoot."

The barkeep set them out. They poured, raised glasses.

"How!"

"How!"

They drank. Snakeweed said, "Hell, that stuff's so much milk. Doctor, give us some Tiger Bone."

Tiger Bone is a Chinese drink,

distilled from tigers. It is all but black, and it is dreadful. It is the backwards of Four-Eye Monongahela. I knew it, Spud thought, I knew it. I'm for it now.

The barkeep unearthed the long, strange bottle from a cupboard. He set the glasses out first and poured into them, not wanting a drop to fall on his hands and burn him. Snakeweed struck a match and lit his drink. Raising the flaming jigger, he said, "How."

Spud groaned internally. He lit his drink and answered. Snakeweed blew out as he drank, but Spud had almost forgotten, and he was worried about having his mustache burnt off, so he drew inward and gulped, thus getting the full benefit of it. He coughed, spat, and wiped his mouth with the back of his hand. Snakeweed just spat, without manners.

"That does it," the big man said.

Spud nodded. His pulse picked up, he felt the warmth, his perceptions became clearer. He saw that Snakeweed was a mite upset that he had been able to take the drink.

"I was hopin' to see you, Snakeweed," he said.

"Well, here I be. It's a pleasure to see you, Spud."

"I was fixin' to talk to you about a little matter."

"This is the best place in the world for it. Let her rip."

"Well, it's about a lady called Elvira Hartshorn."

"Elviry? Nice girl. She's a good

cook, Spud. I'm fixin' to marry her."

"Seem-so she ain't fixin' to marry you."

"Maybe not right now, but she's a-goin' to, and pronto." Snakeweed paused and eyed Spud. "You know me. I'm Snakeweed; that's what they call me and they better like it."

Spud nodded again. That was Snakeweed's war-talk, that last statement. And he realized suddenly that he'd made his own, back there with Miss Hartshorn—Spud Flynn, come of a race o' kings. The Tiger Bone was burning in his vitals.

"I don't want for Miss Hartshorn to marry out of her own free choice," he said. "It don't seem right."

"Them's shore nice sentiments, Spud. But my marryin' ain't something I'm takin' anybody else's advice on."

"Maybe you're goin' to get it all the same." Spud's hands moved a fraction of an inch.

Snakeweed raised a hairy paw. "Don't think of it, Spud. Don't let it pass through your mind. You know I'd only have to plug you to keep up my self-respect. They ain't but one bullet will kill me, and I got it." He patted his cartridge belt, where the green point of the malachite bullet stuck downward among the lead ones. "Hashki Nez made it to kill me with, and I took it from him. I took him by his two hands and pulled him apart like a

boiled fowl. That's me, Snake-weed."

Spud nodded. "Well, I guess that's that. Barkeep, two more o' the same."

Spud's willingness to come back on the liquor cramped Snakeweed's complacency slightly, but he was still satisfied. Spud was thinking fast. He didn't kill me then—why not? Four-Eye won't fill him with human kindness, no more than Tiger Bone would make me mean. I might could get him drunk plain, and take the bullet.

Spud surveyed the man. He was hollow, they claimed he had a clockwork heart. You'd have to fill him up from the bottom. The top of his head and his eyes were small, but to get to them—each foot would take a full quart, a barrel for each leg, and two for his stomach—one for his proper insides and one for what hung out over his belt. Then you'd have to fill up his chest and his arms, and finally his face. No, it couldn't be done, not by any one man. He didn't drink to get tight, but because his insides itched and the liquor was scratchy. Spud looked at the face, the span-wide, almost lipless mouth and single, wiry hairs sticking out a couple of inches all over. Before they got onto him, the Navajos admired Snakeweed because his mouth was full of corn. His middle two teeth were black, the next each way red, then yellow and blue, like Indian corn.

Miss Hartshorn was right; all the cowboys and miners in Arizona all drunk together would still be better.

Spud drank his drink and sighed. "Well, I come a long ways. Guess I'll be turnin' in."

"Sorry to lose your company. It's a pleasure to drink with you."

"Tomorrow maybe. I'm kind o' tired."

"Growin' old, Spud?"

"I reckon. So long."

"So long."

Spud had half an idea to go over and lose some real money at faro; he'd dealt faro, he knew how that man felt, but he decided not to bother with it now. He stepped out into the soft, blue night, full of the smell seeping through from the bit of irrigated land beyond the cottonwoods. He felt at ease. He felt happier than he had since he sat on top of Polvadera Peak, two years ago, and decided that his youth had ended and from now on he was through with trouble. Not since then had his sinews moved as smoothly, his joints been as springy as they were now. At the corral, his horse rose with a surging effort and whickered for more hay. Spud threw some out to him.

He laid out his blanket and slicker, and reclining on them, his head against the saddle, looked at the stars and rolled a smoke. His hand fumbled toward his warbags, touched the bottles. Not yet. He lit up and began thinking. I

ain't but jest started, but it looks like I got to get me some help. Snakeweed ain't immortal, no more'n me. He's Snakeweed and I can like it, can I? There ain't room for the two of us in the Southwest, nor nowheres; if him and me fetch up in hell together, we're shore goin' to worry the devil. Now let's see . . .

He ran his mind back along his memory, like a man loping his horse along a back trail watching for something he let fall. Through years of days he traveled back, watching the sun and moon and darkness, the horizons and water holes and alkali flats of his time. He stopped at himself sitting in a narrow canyon with his gun in one hand and his rope in the other, at midday. His saddle and bridle were piled at one side. The horse-hair rope lay on the ground before him, about ten feet of it from his hand to where it had been cut, and he was staring down the canyon at his horse, a fine big bay, running all out, and one foot and one hand of an Apache showing, the rest of the Indian hidden where he clung on the horse's further side. He was staring open-mouthed, helpless, with his gun in his hand. The cigarette he had given the Apache still lay burning on the ground where he had stood.

That feller was about seventeen ten years ago; he's the thief o' the world if he's alive now. He rolled the thought over in his mind, test-

ing it, making sure that he knew this was it. Yep, I reckon I got to get holt o' Cochise. He looked at the stars. Late, that had taken half the night. He rolled up in his blanket and slept.

III

Well before dawn, he stuck the key and a dollar under the corral owner's door, saddled up and lit out. Four days, he figured, Indian business is always four days, I got to get goin'. He rode at a good trot, upward along a ridge, and so by sunrise had climbed to an outstanding foothill. Here he found enough brush to make, first, a good fire, then an evil-smelling smoke. The pillar went up, straight, high and thick. He threw on tobacco, four times, and two kinds of pollen from his medicine bag, and then in the column of smoke he placed a tuft of down from an eagle feather. The down rose, up and beyond sight; the high top of the column bent to an off-earth, favoring wind, straightened again. Toward the southwest, Spud noted, all right, but nasty traveling. He slapped the roan on the rump.

"Hop along, Sister Mary, hop along."

The first day was like the second, the second was like the third, the third like the fourth, and the fourth like first until noon. At that hour he came to a single piñon in

a cleft of rock. The rock was so hot that it would burn a man's backside if he sat on it, and him wearing thin cotton overalls all but worn through, but the piñon made a ball of shade, a break, a change in starved, desert monotony. This tree bein' here is unreasonable, he figured, I guess I'll stop. All around was gray-white and yellow-white desert, with a thin, greenish wash over it of scattered cactus and yucca. One buzzard hung overhead. He unsaddled, and tethered the roan, otherwise the animal would have made a break for food and water. He lit a cigarette and blew smoke four ways.

"Here I be," he said.

The rock was a trifle higher than the surrounding country. Right smack in the middle of a God damn fryin' pan, sittin' on top of a hot button. This is a hell of a place to choose. I always heard Cochise was ornery.

He stiffened to attention, sending his thought out in the Apaches' own way. They were coming. Nothing could be seen, no change anywhere, but in a wide circle east and south of him motion existed, approached. He took the two bottles out of his war-bags. They were close, eyes and thoughts were upon him. He blew smoke four ways again. They stood up, a hundred men or more, lean, stringy, hollow-stomached, hard. Their hair hung straight, black and disorderly

down their shoulders; on their naked backs, chests and thighs the dust had set in the sweat. Their quiet faces were full of ready war. One of them walked up to him. He had a single feather in his hair, and carried a rifle. The slender barrel with the bluing worn off and the hammer well used but in perfect condition, the scarred stock, the bit of turquoise tied to the trigger guard, the readiness and steadiness with which he carried it, as though it had been born with him, the unindicated but inescapable relationship latent between its front sight and Spud contained the essence of the man, of all these warriors. Spud felt satisfied. In a mixture of bad Spanish and bad Apache he asked, "Where's Cochise?"

"Who knows?" The man stopped about five yards from him.

"I am looking for Cochise, and he knows it."

"I am chief here."

"No you ain't."

"Cochise is not going to talk to you, Amelicano."

Spud stirred slightly. "I am Spud Flynn, and I come of a race o' kings. I am here. Tell Cochise to come to me."

The watching Indians stirred, the headman stepped back. From behind their ranks a man made himself visible, approached. He stood seven feet high, a broad, strong man but not heavy; hard like the others. His big, sun-black-

ened face loomed like the head of a mountain, full of power. He had a shield and spear slung on his back, and carried an eagle feather fan in his right hand. He walked up to Spud and looked him over. For some time they watched each other, both thinking, both putting forth what they had. It was clear to them that they did not need an interpreter.

"I saw your smoke," Cochise said.

"I have something here," Spud answered.

"The Four-Eye," Cochise looked at the bottles. "Good. I take them."

"Maybe-so, maybe not."

"How?"

"I did not ride all this way to make you a present."

"One never does." Cochise sat down.

"There's something's got to be done. I'm thinkin' about something."

"My thought is ready to listen."

"Do you know Snakeweed?"

"Of course. There is too much of him."

"He needs to be removed."

"Remove him."

"Help me."

Cochise spat. "He is bad for us, but he is worse for white men, I think. Why should I remove him? I am fighting your people, I am holding my country for my Apaches. If he kills you, if you kill him, if you both die, we are pleased."

"He's plumb bad. He ain't just bad for you or me, or for every-one; he's badness. True Chiefs, no matter who they be, can't sit and let him go on."

"True Chiefs? Do you think you are one, white man? I have come, I have met you, I have heard you. I shall now take the liquor."

"I'm Spud Flynn, and I come of a race o' kings. The liquor is not yet yours."

Spud uncorked a bottle. The smell arose and spread outward, the Apaches swayed toward it, Cochise ran his tongue over his lips, Spud's mouth watered. He put the cork back.

Cochise said, "*Njoni*. We shall see."

Sitting cross-legged there in front of Spud, he pulled himself in, concentrating himself. His outer borders did not disappear, there remained the space which he occupied, but the essence of his huge frame, his sky-blocking shoulders, centered within his mind, between his eyes. He pulled in his power until it was more than pent lighting, and though he still looked at Spud, he was not noticing him. He was paying attention to that which he intended to do. The Apaches took cover.

The sun overhead stopped, waited, reluctantly crept back. Spud saw the shadow under which he sat swing westward, away from him. The sun was forced down its own trail into morning, it de-

scended, hung above the eastern mesas. Time trembled. It was clear, he knew and Cochise was telling him, the fear over the hiding Indians proclaimed it, that if the sun went down backwards the past would come again, and no man could stand it. The earth was plunging like a horse being backed and fighting the bit, in a minute the earth would start bucking. Spud thought that Cochise had the thighs to ride it, but he knew he hadn't. His mouth was dry and he was sweating. In a minute he'd have to ask him to stop. Then he saw that Cochise was watching him. He got a grip on himself and cleared his throat. Immediately, from old habit automatically, he looked for a target, aimed, spat, and knocked a lizard endwise. He nodded satisfaction, and returned his eyes to Cochise's again.

Slowly, carefully, the Chief set the sun back in its proper place. The shadow of the tree swung round, the earth quieted, the Indians sat up. Cochise filled himself again. His forehead was wet from the effort he had made.

"That is power," he said, reaching for the bottle.

"Wait!"

Spud spoke sharply. He had been scared, he was mad, and he aimed to be madder. He began swearing, soft and mild at first, as his custom was, then as his wrath stood up in him, he got into the swing of his language and the air before his

face changed color. He used the deep cussing of seamen, the low, venomous cussing of cattlemen, the freighters' whiplike oaths, and what he heard from the Mississippi roustabouts when he was a kid at home. He cussed the cussing of Mexican muleteers when they're feeling fine and want to tell the world, and when, at the end of a long, desert day, a mule falls and spills its pack, and another mule steps on their feet. He used the dreadful, whining cussing with which Finn sailors can stop or start a storm, and his father's terrible Irish wrath, and Navajo and Apache and Ute words of shriveling strength, and coureur de bois talk, and Kit Carson's main oath on top of the lot, and all along through it he wove in and out the ideas that came to him, the voice of his anger pouring itself out full. The warriors ducked, raised their shields and touched their medicine bags. Cochise put his fan before his face, and twice he half raised his hand to ask Spud to stop. As the cowpuncher's voice died away at last, there was a thump on the ground between them, and the buzzard which had been sailing high above fell to earth, scorched clean of feathers.

Spud drew a breath. Cochise waved his eagle fan again. He was chagrined. He had performed his showiest magic first and overplayed his hand.

Spud said, "What you done is

ornamental, but it don't serve no purpose. The sun always has to be put back. But this o' mine, now, it's reliev'in' to the feelin's. My throat's terrible dry. I reckon I'll take a drink."

Cochise made a negative gesture with his hand. He drew his knife slowly, and turning slightly to his left, reached upward. With the point against the blue of the upper sky he cut, the blade moving steadily through mild resistance, like cutting cheese. The four strokes made an irregular diamond. With his left hand he pulled that cut piece out of the sky, then he settled back and turned his gaze upon Spud.

Spud looked at the hole, and he couldn't stop looking. He had not known there was a blue like that, he didn't hardly believe any color could be so wonderful. The blue was transparent, letting through into more blueness, into endless depth. Behind the sky, through that hole, something was about to be seen. All happiness and contentment were waiting there. His soul went up toward it, he leaned forward, rapt, staring. There was nothing in the world that mattered if this could be attained. The desire of his innermost heart was about to make itself known. He would rise up and go to it, through the hole in the sky. The world was mean and small; this was everything. Sweet peace filled him. There was a date next Thursday—

did it matter? Here was the end, after all. A promise made. But satisfaction, happiness, showed their full meaning to him. Who am I? he thought. It don't matter. I don't have to go on bein' Spud. His body had no weight, his whole being floated deliciously. A word of a kingly line whispered in his memory, a promise made. With an effort, he put his hand over his eyes. I'm Spud Flynn, and I come of a race o' kings. Snakeweed. He shook himself, opened his eyes and looked at Cochise.

"That was strong," he said. He still felt wistful.

Cochise put the piece back and sheathed his knife. He reached for the bottle.

"That was strong," Spud repeated, "but you didn't dast look at it yourself."

"What can you watch that I cannot?"

"Looky here."

He pulled a long piece of fine string out of his pocket.

"I was a sailor oncet," he said, and began knotting.

While his fingers worked, he whistled "Whisky Johnny" through his teeth making a sound like wind in ropes, monotonous, repetitious, dolorous. The string moved, turned back upon itself, a fast plaiting with manifold knots. A web grew rapidly, strong, netlike, with a curious pattern in it. The whistling and the work continued. Cochise leaned closer, he was hardly

breathing and his muscles bulged with effort. At length he put his hand out, covering the sennit.

"Untie it," he said in a choked voice.

Spud pulled one end, the whole thing came out straight with a little whizz. Cochise let out a sigh, moved his arms, swung himself from side to side, feeling his freedom again.

He looked straight at Spud and said in a low voice, "I was in there."

"Sure you was." Spud put the string away.

"Let us each have a little of that Four-Eye. There has been great work this afternoon."

"Suits me. Seems a shame to keep puttin' off a good thing."

Spud opened a bottle and passed it over. Cochise said "How!" and drank. Spud said "How!" and drank. The perfume of the Four-Eye Monongahela, its full flavor and its great strength pervaded them, filling them out, penetrating to their finger tips. They felt good will toward mankind, they were elevated, their powers increased and their minds clarified.

"I never had a whole bottle of this before," Spud said. "How!"

Cochise took it in his turn. "I did once, long ago, but I shared it with Mangas Coloradas. How!"

They were superior to the world, but they desired it to be a better place, and they felt able to make it so. Spud's eye fell on the singed

buzzard lying between them in its horrible nakedness.

"They ain't pretty even when they're alive," he said, "but this, like it is now—well, it don't remind me of a chicken dinner."

"Let us improve it," Cochise said.

He passed his fan over the bird, and blew upon it. It was clothed again in its rusty black feathers. With an awful squawk it rose from the earth.

"You're plumb full o' magic," Spud said. "What I got's skill."

He pulled his two guns and fired each, twice. The bird came down again, stunned, two leaden bullets fused into shackles around its feet, two more in a collar around its neck.

"How's that?"

Cochise said, "Give the bird a drink, he deserves it."

Spud poured some of the liquor down its beak.

"What the hell's goin' on here?" the buzzard said. "You two can show off plenty power without misusin' me this way. Gimme some more o' that liquor and turn me loose."

"I reckon you've had plenty," Spud said.

"You do what I say, Spud Flynn. I know all about you. I know where you stole that roan you're goin' around on. And you, you big Apache you, I know where your life medicine's hidden, I do. You turn me loose and gimme another drink."

They said together, "You know too much." One reached for his gun, the other for his knife.

"Oh no you don't," the buzzard said. "I ain't the only one. What in hell do you think we do to pass the time up there, waitin' for our meals? You kill me, and I got plenty brothers to attend to you. The both of you."

"Free him," Cochise said.

Spud freed the bird and gave it another drink. "So long," it said, and flew upward unsteadily, emitting curious harsh sounds.

"It thinks it's a meadow lark," Spud said. "That's good liquor." He paused as an idea struck him. "Say, how did that bird get started talkin'? Did you do that?"

Cochise smiled faintly.

The sun was getting low. Cochise spoke to his men and fires were made, cooking started. An Indian brought a pile of small herbs, such as white men do not even see, for the roan, and a fire was built between the two men, but no one offended them with an offer of food. They smoked together ceremonially, contemplating the intimate, man-centered flame and the wide, universal sunset. Night followed close; when they sat enclosed within a sphere of low firelight, Spud passed the bottle. They smoked again.

Cochise said, "Now let us consider Snakeweed. My thought is upon him."

"For many reasons, any one o'

which would be plenty, I've got to attend to him. I've made my war-boast and so has he."

"Good then. We have warriors here. Let us start."

"No, we can't do it that way. Snakeweed, he's got power, too. I jest want a little help to get around it."

Cigarettes were finished before Cochise replied. "I am holding my power here in the Apache country, I need it for my people. We win our battles, but we are few and hard pressed. One can win and win and lose in the end by going beyond one's strength. My power is here, for my people. I am afraid of letting my power leak out in a white man's affair, lest once it starts it all might run out. But you are right about Snake-weed, and Chiefs must help each other. What do you wish?"

Spud said gravely, "I don't reckon this'll wear out your medicine none. You know that malachite bullet he's got, the only one that will kill him?"

"Yes, Hashki Nez made it, but the Navajos talk too much. It was too bad."

"Well, I reckon there's a man o' yours can steal it for me. I'll tend to the rest."

"What man?"

"Feller who stole a big horse from me."

"We have stolen many horses, of all kinds and colors."

"Well, he was about seventeen

years old, this Indian. I had the horse on a rope and my gun in my hand, and I was watchin' him, and it was midday. That was ten years ago. I figure if he's still alive he ought to be the thief o' the world by now."

Cochise smiled. "He is here. You are right." He spoke toward the surrounding fires.

A slender man of medium height came into the light. He was ordinary in every way, save for the fluid quietness of his movements. Cochise told him to sit down.

"This is he."

"And he's gone on stealing?"

"Look at the bottle."

Spud took it up. There was a drink less in it than there had been a moment ago. Its stimulation showed on the Thief's face.

"All right. He'll do."

They explained the matter. The man looked pleased.

"That will be good to do. It will be a credit to me. For a long time I have done just ordinary stealing; my people say to me, 'Thief, where is your skill?' It is good."

They gave him another drink, searched him, and took both bottles back. Cochise told him to return to his own fire.

It would take a book to tell what Cochise and Spud discussed as the stars moved westward and the bottle was emptied, as stars crossed over and they went into the second bottle. They talked far, wide, high and deep. Under the influence of

the Four-Eye Monongahela they reached out and embraced mankind, understanding, pitying, loving. They touched on the past and the future, and poured wisdoms and vision back and forth into each other. It was a great night, a great talk.

Near dawn the Thief joined them to finish the second bottle. Cochise gave the horses four kinds of pollen, life, breath and a feather, and the Thief and Spud mounted. They could have run to Spareribs in a few hours, the way they were then, but being proud men it suited them to ride.

At first light Spud and the Chief touched hands.

"When you have time," Cochise said, "light your fire again and send a feather. Do it for no reason."

"I'll do that."

IV

Spud and the Thief loped all that day and all the next night, at dawn reaching the ridge above Spareribs, and they took shelter in a mesquite grove. There they lay till the town awoke, and at last, after the sun was high and the air hot and dusty, Snakeweed came out of his shack. The Apache smiled.

"In his cartridge belt," Spud said.

"Do you want the whole belt?"

"Just the bullet."

"Good."

The Indian moved like smoke

down the slope of the ridge. Near a stone he bent, pulled himself into himself, disappeared. Spud rolled over and went to sleep.

When he woke, well after noon, his first thought was, Golly, I hope I ain't slept it off. He sat up and considered himself. Reckon not. No. It ain't that kind o' drink. His joints moved supplely, his sinews were oiled, his thought danced as he considered life. Hell, I ain't old, he decided. What got into me? I ain't one that ages that-a-way. I'm back into it again. I'm Spud Flynn, I am, and by God I'm delighted.

He took it easy, smoking and thinking. Nice feller Cochise. Companionable when you got to know him. I'd kind o' like to look through that hole again, only I'd run a mile if he started to carve it out.

The Thief stood before him. "Here it is," he said.

Spud took the cartridge, staring at it. The malachite bullet's strong color glowed in the shade, it seemed to have life. One felt the magic that had been put into it.

"That's fine," he said. "Does he know he's lost it?"

"No." The Indian looked discontented. "I could have stolen him as well as not. And the place is full of good horses."

Spud nodded. "You'd like some-thin' to take back with you, to show."

"Yes."

"Well, go ahead. The sky's the limit, jest so's you don't steal my roan or interfere with my play. I'll be through just after sundown, then go to it."

"*Njoni.*" The Thief hesitated. "How about a Mexican girl?"

"No. That ain't nice. Don't you do it."

"Good. I shall take just horses."

"All right. And thanks. All men will know soon that you stole the bullet."

The Indian smiled. "That is good. I shall go further up and wait. *Adiós.*"

"*Adiós.*"

The bullet was set in a percussion-cap cartridge. Spud went delicately about putting it into one of his new center-fires, fearful of losing the medicine, but when he had done, he saw that it was all right. The bullet was full of certainty. As the sun went down, he rode into Spareribs and put his horse up again at the Rafter Lazy J corral.

I shore feel fine, he thought as he drifted along the street. His spurs clinked on his heels, he was at ease, full of peaceful excitement and life. I am Spud Flynn, and it suits me fine. He would not eat now, though he had cause to be hungry; the Four-Eye still worked smoothly in his system, and Indian medicine calls for empty stomachs. He was full of good will and readiness.

To pass the time, he went into the saloon and strolled up to the

faro bank. The dealer greeted him with the same weary, professional show of warmth he used on hundreds of such dingy, threadbare cowboys. Spud looked over the layout and the deck. What he didn't know about faro didn't exist. He lost a dollar, then put up two dollars copped and lost them. The dealer had been handling dimes for so long he had to stretch his fingers to pick up the cartwheels.

"Try again," he said. "The luck always changes."

"Thanks," Spud said. "I reckon that's sufficient."

He walked out again, feeling pleased. It was dark outside now, in starlight the frame houses and adobes were less achingly bare. He made his way, leisurely, to the house with the broken front porch

where Snakeweed lived. Looking through the window he could see the man gnawing at the roast hind leg of a bull beef. He stopped, picked a piece of gristle from between his teeth with a skinning knife, and went back to eating.

Spud felt just fine, he felt happy and that the world was right for him. Care was gone. Here was the beginning of pure pleasure. Standing a few yards away, he picked up a rock and hove it at the door. He heard Snakeweed move, and a chair fell over.

"What in hell?" called that harsh, roaring voice.

Spud loosened his gun in its holster.

"Come on out, Snakeweed you son of a bitch. Come on out and get it."

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Bailey should NOT have blushed
to the ears when beautiful Gladia
Delmarre casually stepped
out of her shower to talk with
him! For all Solarians CON-
SIDERED THAT ENTIRELY
PROPER . . . because their so-
cial contacts were carried on by
VIEWING through two-way
television.

And just as Elijah (an Earth-
man brought up in under-
ground cities) was terrified by
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ians dreaded mingling with
other HUMANS. Physical con-
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Even DISCUSSING such things
was obscene!

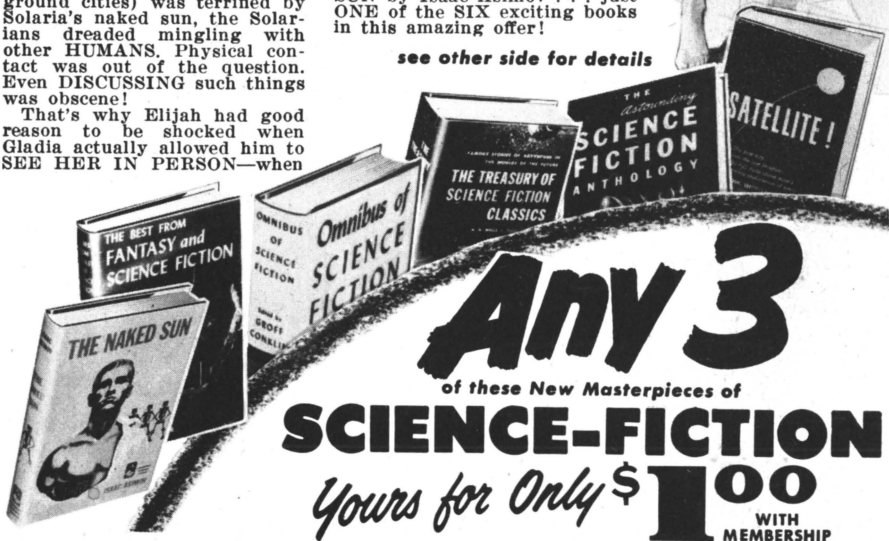
That's why Elijah had good
reason to be shocked when
Gladia actually allowed him to
SEE HER IN PERSON—when

she brazenly reached out her
naked fingers to TOUCH HIM!

There was no doubt left in his
mind that there was something
unspeakably strange about this
exotic temptress. But it was be-
coming more and more difficult
for Elijah to admit—even to
himself—that she was his prime
suspect in a fantastically sordid
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